

THE BERGSONIAN MOMENT:
SCIENCE AND SPIRIT IN FRANCE, 1874-1907

by

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Abstract

My dissertation is an intellectual and cultural history of a distinct movement in modern Europe that I call “scientific spiritualism.” I argue that the philosopher Henri Bergson emerged from this movement as its most celebrated spokesman.

From the 1874 publication of Émile Boutroux’s *The Contingency of the Laws of Nature* to Bergson’s 1907 *Creative Evolution*, a wave of heterodox thinkers, including Maurice Blondel, Alfred Fouillée, Jean-Marie Guyau, Pierre Janet, and Édouard Le Roy, gave shape to scientific spiritualism. These thinkers staged a rapprochement between two disparate formations: on the one hand, the rich heritage of French spiritualism, extending from the sixteenth- and seventeenth-century polymaths Michel de Montaigne and René Descartes to the nineteenth-century *philosophes* Maine de Biran and Victor Cousin; and on the other hand, transnational developments in the emergent natural and human sciences, especially in the nascent experimental psychology and evolutionary biology. I trace the influx of these developments into Paris, where scientific spiritualists collaboratively rejuvenated the philosophical and religious study of consciousness on the basis of the very sciences that threatened the authority of philosophy and religion. Using original materials gathered in French and Belgian archives, I argue that new reading communities formed around scientific journals, the explosion of research institutes, and the secularization of the French education system, brought about this significant, though heretofore neglected wave of thought.

The Bergsonian Moment reframes the formative role of science in the fin de siècle. Following France’s defeat to Germany in The War of 1870, French Republicans

invoked science as a wellspring of national regeneration, precipitating a crisis that historians have framed as society's moral anxiety in the face of materialism and as intellectuals' disillusionment in the promise of reason. I interpret the period, to the contrary, as a historical opening seized to transform the meaning and scope of science. Far from having led a revolt against positivism, as a long-standing historiographical narrative holds, Bergson drew on the natural and human sciences to expand the bounds of reason, and led to an enduring reconsideration of the place and value of memory, time, and experience in modern Europe.

Readers

Prof. Warren Breckman, History (University of Pennsylvania)

Prof. Ruth Leys, Humanities Center and History

Prof. Paola Marrati, Humanities Center and Philosophy

Prof. Todd Shepard, History

Prof. Gabrielle Spiegel, History

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As Bergson wrote in his 1902 essay “Intellectual Effort,” the inventive work of consciousness has to “begin over and over again, each time fixing the partial result obtained.” Thanks to exchanges, arguments, and conversations with several close friends, I was able to begin inventing this dissertation over and over again. These encouraging and thoughtful people include: Claudia Bicen, Shikha Bhattacharjee, Tony Chiarito, Tarek Dika, Petey Gil-Montllor, Hirsh Jain, Matt Kelly, Will Leiter, Jacob Levi, Adwait Parker, Dan Sheehan, Martin Shuster, Max Stevens, and Fabien Thayamballi. Finally, I owe a debt of immense gratitude to Loumia Ferhat, my most challenging critic and ardent supporter. And my parents, Carolyn and Larry Craig McGrath, inculcated a work ethic and intellectual passion that fueled this project.

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Introduction

Philosopher, statesman, mathematician, celebrity, Henri Bergson was a towering figure of the fin de siècle. He achieved world-historical fame for having inventively articulated the dynamic contours of consciousness – or spirit, from the French *l'esprit*. Bergson's thought, and the late nineteenth-century period it defined, remain two of the most celebrated yet misunderstood moments in the intellectual and cultural history of modern Europe. Unlike many philosophers who safeguarded their trade from scientific intrusion, for fear that the ascendant demands of experimentation and quantification would threaten philosophy's metaphysical territory, Bergson meticulously studied burgeoning research in the natural and human sciences to show that, instead of squelching metaphysics, scientific developments inspired new metaphysical problems. It was from within advancements in experimental psychology and evolutionary biology in particular, I argue, that the cherished compendium of Bergsonian concepts emerged: the *durée* of lived experience; philosophical intuition; the planes of consciousness; and the *élan vital* [vital impulse]. The global circulation of these concepts defined the Bergsonian moment. It was a moment that touched both sides of the Atlantic.¹ And recently, scholars have traced its resonance beyond Europe and America.² The fame that Bergson achieved, however, did not depend on the singularity of his corpus, but on his contributions to a

¹ Paul Douglass, *Bergson, Eliot, and American Literature* (Lexington, KY: University of Kentucky Press, 1986); Tom Quirk, *Bergson and American Culture* (Chapel Hill: University of North Carolina Press, 1990); Larry McGrath, "Bergson Comes to America," *Journal of the History of Ideas* 74, no. 4 (2013): 599-620.

² Alain Guy, "Le bergsonisme et Amérique latine," *Caravelle* 1, no. 1 (1963): 121-139; Souleymane Bachir Diagne, *Bergson postcolonial: L'élan vital dans la pensée de Léopold Sédar Senghor et de Mohamed Iqbal* (Paris: CNRS Editions, 2011); *African Art as Philosophy: Senghor, Bergson and the Idea of Negritude*, trans. Chike Jeffers (Chicago: University of Chicago Press, 2011); Arnaud François and Camille Riquier, eds., *Annales bergsoniennes, VI: Bergson, le Japon, la catastrophe* (Paris: Presses universitaires de France, 2013).

wide movement in French thought that innovatively appropriated the sciences as a springboard to revolutionize the modern understanding of consciousness.

Since descending from his prestigious chair at the Collège de France, a position he held from 1900 to 1920, Bergson has been firmly installed in the canon of Western thought, cemented by his 1927 Nobel Prize in literature. Yet, Bergson became significant because his work steered a cultural and intellectual movement that swept over France in the late nineteenth century – a movement eclipsed by the prestige of *Bergsonisme*. These scientific spiritualists, as I am calling them, collaboratively staged a rapprochement between two disparate formations: on the one hand, the rich heritage of French spiritualism, perhaps “the most French of all philosophical orientations,”³ extending from the sixteenth- and seventeenth-century polymaths Michel de Montaigne and René Descartes to the nineteenth-century *philosophes* Maine de Biran and Victor Cousin; and on the other hand, transnational developments in the nascent natural and human sciences – especially in evolutionary theory, the physiology of the nervous system, brain localization, psychophysics, and psychopathology – which exploded men’s and women’s understanding of their relations to each other and the world. As these developments rapidly inundated Paris, provoking the Third Republic to reshape French society in the image of science, scientific spiritualists sought to rejuvenate the nation’s spiritualist heritage from within the emergent sciences. From 1874, when the Ministry of Public Instruction overhauled the official education curriculum to promulgate scientific research and cultivate rational Republican citizens, to the appearance of Bergson’s *L’Évolution*

³ Jean Louis Fabiani, *Qu’est-ce qu’un philosophe français?: La vie sociale des concepts (1880-1980)* (Paris: Éditions de l’École des hautes études en sciences sociales, 2010), 153.

créatrice in 1907, scientific spiritualists gave shape to a distinct period in the history of European thought, defined by the problem around which they converged: to revolutionize the philosophical and religious study of consciousness on the basis of the very sciences that threatened the authority of philosophy and religion.

This was the problem that Bergson tackled in his early books. *Essai sur les données immédiates de la conscience* (1889) critiqued psychophysics' claim to quantify sensory perceptions; *Matière et mémoire* (1896) took aim at psychopathology's contribution to brain localization; and *L'Évolution créatrice* (1907) confronted the theoretical underpinnings of evolutionary biology. In each book, Bergson pressed recent research in the incipient sciences beyond their methodological limits. "On this new ground philosophy ought to follow science," Bergson wrote in *L'Évolution créatrice*, "in order to superpose on scientific truth a knowledge of another kind, which may be called metaphysical. Thus combined, all our knowledge, both scientific and metaphysical, is heightened."⁴ Bergson's dialogue with the natural and human sciences was part of a wider conversation, I aim to show, within a movement already underway under the Third Republic. "The *new spiritualism*," as one critic wrote in 1884, "is not a new doctrine: it is spiritualism renewed by science."⁵ These scientific spiritualists' endeavor to surpass the limits of scientific explanation, and thereby justify philosophy and religion anew, determined the stakes of the philosophical itinerary that Bergson pursued.

It is by no means innocent to claim that Bergson was a scientific thinker, let alone a thinker who belonged to a scientific movement. Bergson has been canonized as *the* transitional figure straddling the threshold between the nineteenth and twentieth

⁴ Henri Bergson, *Creative Evolution*, trans. Arthur Mitchell (New York: Henry Holt, 1911), 199, originally published as *L'Évolution créatrice* (Paris: Félix Alcan, 1907).

⁵ Étienne Vacherot, *Le nouveau spiritualisme* (Paris: Hachette, 1884), i.

centuries. Reflecting on the past two centuries of French thought, Michel Foucault noted a fissure dividing its lineages:

It is the one that separates a philosophy of experience, of meaning, of the subject, and a philosophy of knowledge, or rationality, and of the concept. On one side, a filiation which is that of Jean-Paul Sartre and Maurice Merleau-Ponty; and the other, which is that of Jean Cavaillès, Gaston Bachelard, Alexandre Koyré, and Canguilhem. Doubtless this cleavage comes from afar, and one could trace it back through the nineteenth century: Henri Bergson and Henri Poincaré, Jules Lachelier and Louis Couturat, Pierre Maine de Biran and Auguste Comte. And, in any case, it was so well established in the twentieth century that, through it, phenomenology was admitted into France.⁶

Foucault's division between a philosophy of experience and a philosophy of the concept predictably situates Bergson in opposition to those thinkers, the mathematician Poincaré above all, who were allied to the hard sciences. It is debatable whether Foucault's division adequately captures the defining contours of French thought.⁷ And it is even more problematic, as contemporary scientists' interest in his work attests, to frame Bergson within an intellectual lineage apart from the sciences.⁸ Two things, however, are clear: the first is that it has become commonplace to historicize Bergson as skeptical of, if not resistant to, the scientific advancements of his era; second, Bergson has become singularly representative of the passage from nineteenth- to twentieth-century philosophy. Histories of twentieth-century French philosophy begin with Bergson.⁹ Those of the

⁶ Michel Foucault, "Life: Experience and Science" in *Essential Works of Foucault, 1954-1984*, Vol. 2, *Aesthetics, Method and Epistemology*, ed. James D. Faubion, tr. Robert Hurley and Paul Rabinow (New York: New Press, 1998), 466, originally published as "La vie: l'expérience et la science," *Revue de métaphysique et de morale* 70 (1985): 4.

⁷ Elie During contests the lineage, preferring to place Bergson at the intersection of the two traditions in "'A history of Problems': Bergson and the French Epistemological Tradition," *Journal of the British Society for Phenomenology* 35, no. 1 (2004): 4-23.

⁸ The chemists Ilya Prigogine and Isabelle Stengers are arguably the most famous scientists to promote Bergson's work in the service of what they see as the deep interaction, rather than rupture, between nature and culture. See *La nouvelle alliance* (Paris: Gallimard, 1978).

⁹ Joseph Chiari isolates Bergson at the debut of twentieth century in *Twentieth-Century French Thought. From Bergson to Lévi-Strauss* (London: Paul Elek, 1975), 21-59; Eric Matthews submits Bergson to a similar treatment in *Twentieth Century French Philosophy* (New York: Oxford University Press, 1996), 14-

nineteenth century conclude with him.¹⁰ Although a consensus confirms Bergson's transitional situation, philosophers and historians alike have yet to define the movement from which the Bergsonian moment emerged.

The goal of my dissertation is to document the formation and explain the coherence of scientific spiritualism. This movement was a collaborative philosophical project as much as a distinct moment in modern European history. That is, scientific spiritualism had a set of theoretical commitments and a conceptual integrity as coherent as other movements of the late nineteenth and early twentieth century, such as neo-Kantianism and American pragmatism.¹¹

But more important, scientific spiritualism opens a heretofore-neglected window onto the social resonance of science in the fin de siècle that challenges accepted understandings of the period. The transformations that experimental psychology and evolutionary biology brought about in Europe were nothing short of seismic. These developments steered the emergence of modernism,¹² and stoked the ideological battles between socialism and fascism that preoccupied early twentieth-century politics.¹³

39; Gary Gutting places Bergson alone alongside the adjacent currents of positivism, idealism, and spiritualism in *French Philosophy in the Twentieth Century* (London: Cambridge University Press, 2001), 9-25; so does Alan Schrift in *Twentieth-Century French Philosophy: Key Themes and Figures* (New York: Wiley-Blackwell, 2005), 5-16.

¹⁰ See Dominique Parodi, *La Philosophie contemporaine de la France: essai de classification des doctrines* (Paris: Félix Alcan, 1919); George Herbert Mead, "French Philosophy in the Nineteenth Century" in *Movements of Thought in the Nineteenth Century*, ed. Merritt H. Moore (Chicago: University of Chicago Press, 1936), 418-510; F.C.T. Moore, "French Spiritualist Philosophy," in *Nineteenth-Century Philosophy*, Vol. 2, *Revolutionary Responses to the Existing Order*, ed. Alan D. Schrift and Daniel Conway (Chicago: University of Chicago Press, 2010), ch. 8.

¹¹ Deiter Henrich's concept of a "historical constellation" captures what my dissertation aims to constitute: that is, a tightly knit creative group of people who contact each other either face-to-face or through letters. See Deiter Henrich, *Konstellationen. Probleme und Debatten am Ursprung der idealistischen Philosophie (1789-1795)* (Stuttgart: Klett-Cotta, 1991).

¹² John Burrow, *Evolution and Society: A Study in Victorian Social Theory*. (London: Cambridge University Press, 1966); Michael Ruse, *The Darwinian Revolution: Science Red in Tooth and Claw*. (Chicago: University of Chicago Press, 1979), ch. 9; Stephen Kern, *The Culture of Time and Space, 1880-1918* (Cambridge, MA: Harvard University Press, 1983).

¹³ Gertrude Himmelfarb, *Darwin and the Darwinian Revolution* (Garden City: Doubleday, 1959), books 4-

Despite historians' rich and diverse explorations of science's contributions to modern Europe, many lean on a simplistic historiographical narrative that presents social reactions to science within the narrow and oppositional trope of crisis.

The crisis narrative has achieved especial historiographical salience in the case of France, where Republicans invoked science as the source of national regeneration following their humiliating defeat in the Franco-Prussian War of 1870, which many politicians and social reformers attributed to Germany's scientific and technological prowess. The ascendant role of science in French society provoked a crisis marked by moral anxiety and intellectual disillusionment, so the narrative goes, as men and women grappled with a disenchanted world mastered by iron-clad and universal laws. "The advocates of reason and science thought it possible to explain and rule the world," Eugen Weber characteristically writes in *France, Fin de Siècle*, "But a reaction soon developed, one that stressed irrational factors such as the unknown, the mysterious, and the wonderful."¹⁴ The logic of the crisis narrative hinges on its dyadic structure, which H. Stuart Hughes inaugurated by positioning Bergson at the forefront of a "revolt against positivism" and a retreat into the irrational.¹⁵ Now half a century old, vestiges of Hughes narrative still inform accounts of the fin de siècle as a "revolt against mechanism,"¹⁶ a

6; William Logue, *From Philosophy to Sociology: The Evolution of French Liberalism, 1870-1914* (Dekalb, IL: Northern Illinois University Press, 1983); Linda L Clark, *Social Darwinism in France* (Birmingham, AL: University of Alabama Press, 1984).

¹⁴ Eugen Weber, *France, Fin de Siècle* (Cambridge, MA: The Belknap Press, 1986), 142.

¹⁵ H. Stuart Hughes, *Consciousness and Society: The Reorientation of European Social Thought, 1890-1930* (New York: Vintage, 1958), 33-66.

¹⁶ R.C. Gronin depicts the spiritualist period as a religious revival in *The Bergsonian Controversy in France, 1900-1914* (Calgary: University of Calgary Press, 1988), 1-20.

“reaction against materialism,”¹⁷ a “rejection of positivism,”¹⁸ or a “revolt against rationality.”¹⁹

The central methodological argument of my dissertation is that, far from having led a revolt against positivism, scientific spiritualists sought to radically reconceive what counts as a positive fact. According to my reading, the incipient sciences of the late nineteenth century did not engender a crisis marked by anxiety and disillusionment, but a new epistemological possibility creatively seized on by scientific spiritualists, Bergson foremost among them, in order to expand the bounds of reason. In the name of a higher positivism, Bergson’s generation stirred Europeans to reconsider the place and value of memory, time, and experience in modernity.

Revisiting the social resonance of science in Bergson’s France is especially pertinent today in light of the ascendant prestige that the neurosciences and sociobiology garner beyond laboratory walls. These sciences inform incipient fields such as neuro-legal studies, neuroethics, neurophilosophy, and even neurohistory.²⁰ Brain imaging revealing the neural correlates of conscious experience, as well as evolutionary models demonstrating the adaptive function of cultural practices, have provided many scholars in the humanities and social sciences with the conceptual tools to rethink their disciplines’ epistemological relationship to the sciences in the wake of the perceived exhaustion of the constructivist and semiotic methods so predominant since the 1960’s. Whether we are

¹⁷ J.W. Burrow, *The Crisis of Reason: European Thought, 1848-1914* (New Haven: Yale University Press, 2000), 56-67.

¹⁸ James A Winders, *European Culture Since 1848, From Modern to Postmodern and Beyond* (New York: Palgrave, 2001), 94.

¹⁹ Thomas Laqueur, “Why the Margins Matter: Occultism and the Making of Modernity,” *Modern Intellectual History* 3, no. 1 (2006): 112.

²⁰ See Francisco Ortega and Fernando Vidal, eds., *Neurocultures. Glimpses into an Expanding Universe* (Frankfurt: Peter Lang GmbH, 2011); Melissa M. Littlefield and Jenell M. Johnson, eds., *The Neuroscientific Turn: Transdisciplinarity in the Age of the Brain* (Ann Arbor, MI: University of Michigan Press, 2012).

in the midst of a post-linguistic turn spurred by the sciences is a point of heated contention.²¹ While some humanities and social science scholars embrace the newfound dialogue beyond *The Two Cultures* that C.P. Snow lamented in 1959, others defend their disciplines against the incursion of reductive causal analyses. A history of scientific spiritualism promises to enrich these debates by offering a timely model to take stock of the rapid dissemination of the neurosciences and sociobiology today.

Not only did scientific spiritualists advance a vision of interdisciplinarity built out of a sustained dialogue with the embryonic beginnings of these sciences, but scientific spiritualists also experienced momentous institutional transformations marked by the professionalization of philosophy and a heightened proximity to scientific research. Indeed, Bergson so swiftly climbed the academic hierarchy in France, from a provincial instructor in a *lycée* (the French equivalent of high school) to the prestigious Collège de France, in large part, I argue, because he mastered the social function that the Third Republic charged philosophy instructors with carrying out: disseminating scientific knowledge and inculcating secular values. This institutional context shines a light on scientific spiritualists' success in renewing spiritualism on the basis of science without letting their distinct disciplinary methods become subservient to science.

By returning to the lessons of scientific spiritualism, I do not mean to suggest that the movement can be seamlessly transported into the present. Rather, I have chosen to document the development of Bergson's thought because it has enjoyed a resurgence, particularly within recent scientific inquiry. As the French neuroscientist Jean-Pierre Changeux writes, "Henri Bergson went so far as to suggest that scientific knowledge of

²¹ See "AHR forum: Historiographic "Turns" in Critical Perspective," *American Historical Review* 117, no. 3 (2012): 698-813.

the brain might be expected to have positive consequences for philosophy.”²² For Changeux, Bergson’s thought offers more than a critique of biological reductionism, but a timely reminder for humanists and scientists alike that “The brain needs to be seen as an open, motivated, and self-organizing system continually engaged in the exploration of its environment.”²³ To be sure, efforts have been made to synthesize the *sciences humaines* with the *sciences durs* since the domains’ bifurcation in the seventeenth century.

Scientific spiritualists, however, were unique in demonstrating that the monumental advancements in physiological psychology and evolutionary theory engendered a new understanding of consciousness that necessitated distinctly metaphysical concepts.

The Bergsonian oeuvre lies at the crossroads of several philosophical trends extending from early nineteenth-century spiritualism to the present. Bergson was a guiding interlocutor within the pragmatist movement on both sides of the Atlantic;²⁴ he was an originating figure in French phenomenology;²⁵ his thought proved influential for French post-structuralism, especially following Gilles Deleuze’s celebrated monograph,²⁶ and most recently Bergson’s thought has taken center stage among “new materialisms.”²⁷

²² Jean-Pierre Changeux, *The Physiology of Truth: Neuroscience and Human Knowledge*, trans. M.B. DeBevoise (Cambridge: The Belknap Press, 2002), 2; originally published as *L’Homme de vérité* (Paris: Odile Jacob, 2002).

²³ Ibid., 32. Also see Sergiu C. Blumen and Nava Blumen, “From the Philosophy Auditorium to the Neurophysiology Laboratory and Back: From Bergson to Damasio,” *Israeli Medical Association Journal* 4, no. 2 (2002): 163-165; Alain Panero, *Corps, cerveau et esprit chez Bergson. Le spiritualisme minimaliste de Matière et mémoire* (Paris: L’Harmattan, 2006).

²⁴ See A.O. Lovejoy’s famous account of Bergson’s influence on pragmatism, “The Thirteen Pragmatisms. I,” *The Journal of Philosophy, Psychology, and Scientific Methods* 5, no. 1 (1908): 5-12; Part II 5, no. 2 (1908): 29-39; more recently see Stéphane Madelrieux, ed., *France Bergson et James, cents ans après*, ed. (Paris: Presses universitaires de France, 2011), especially Paola Marrati, “James, Bergson et un univers en devenir,” 123-140.

²⁵ Herbert Spiegelberg claims that Bergson’s thought made France receptive to phenomenology in the twentieth century, *The Phenomenological Movement: A Historical Introduction*, Vol. 2 (The Hague, NL: Martinus Nijhoff, 1960), 398-399.

²⁶ Gilles Deleuze, *Le Bergsonisme* (Paris: Presses universitaires de France, 1966); also *Différence et répétition* (Paris: Presses universitaires de France, 1968), chs. 2, 4.

²⁷ Elizabeth Grosz, *The Nick of Time: Politics, Evolution, and the Untimely* (Durham, NC: Duke University Press, 2004), 155-214; Jane Bennett, *Vibrant Matter: A Political Ecology of Things* (Durham, NC: Duke

My aim, however, is to reveal that the conceptual purchase of Bergson's philosophy was not exclusively philosophical, and further, that Bergson emerged as the most articulate advocate within an intellectual and cultural milieu that sought to revolutionize the methods of philosophy in response to scientific and social transformations in late nineteenth-century France.

So, the argument of my dissertation is threefold:

1. Scientific spiritualism constituted a distinct moment in the history of European thought generally and of French spiritualism particularly. Whereas historians and philosophers have presented French spiritualism as a linear progression beginning with Maine de Biran, passing through Victor Cousin, and culminating in Bergson, I contend that scientific spiritualists introduced a significant rupture in their spiritualist legacy during the last quarter of the nineteenth century.
2. The history of scientific spiritualism casts into stark relief the limitations of the long-held historiographical narrative that Bergson's generation led a "revolt against positivism." To the contrary, I argue that scientific spiritualists sought to widen the scope of positivism to include conscious experience, and furthermore, that the *fin de siècle* should be re-conceptualized, not as a *crisis* of science, but as a *contestation* over the meaning of science.
3. Today as humanities and social science scholars appropriate research from neuroscience and sociobiology, scientific spiritualism offers a critical moment

University Press, 2010), ch. 5; William E. Connolly, *The Fragility of Things: Self-Organizing Processes, Neoliberal Fantasies, and Democratic Activism* (Durham, NC: Duke University Press, 2013), 140-148.

from which to trace a history of the present. By reorienting humanistic and social inquiry around empirical data while simultaneously challenging biological reductionism, scientific spiritualists, Bergson chief among them, furnish conceptual resources to critique the merit and limits of interdisciplinary links forged with science in the present.

Spiritualism in France

The term “spiritualism” poses difficulties. Those difficulties begin with the French word, *l’esprit*, signifying the realm of the intellectual faculties (apparent as well in the German, *Geist*), and extend back to the Latin, *spiritus*, meaning “breath.” The difficulties are compounded by the hostility the word connotes towards the hard sciences. Both “spirit,” as well as “esprit,” elicit a religious and mystical, if not cultish, otherworldly sense.²⁸ I will explore the religious ramifications of spiritualist thought. But “spirit” is not exclusively religious. The historically textured meaning of the term signifies the dimension of reality revealed through inner experience. “Spirit,” in this sense, comes close to “consciousness,” what philosophers today call “mind,” and what brain researchers call “cognition.”

The spiritualist tradition has deep roots in French intellectual history, beginning with Michel de Montaigne. His sixteenth-century essays argued that all human knowledge ultimately has its source in the knowledge of one’s self. Since humans’ inner

²⁸ “Spiritualism” should be distinguished from “spiritism,” understood as contact with an alternate “spirit” world, a field that also drew wide interest in France in the late nineteenth century. See John Warne Monroe, *Laboratories of Faith: Mesmerism, Spiritism, and Occultism in Modern France* (Ithaca: Cornell University Press, 2007); M. Brady Bower, *Unruly Spirits. The Science of Psychic Phenomena in Modern France* (Champaign, IL: University of Illinois Press, 2010).

self is in constant flux, it is imperative, Montaigne held, to control one's passions, seek happiness, and be content that absolute certainty is unattainable. Montaigne's idea that introspection confers a privileged kind of knowledge found its most systematic account in Descartes' *cogito*. Humans' clear and distinct perception of their thought reveals, according to Descartes, a kind of introspective knowledge distinct from observation of the external world. Descartes' division between *res cogitas* and *res extensia* served to enforce this separation. His spiritualism consisted of safeguarding the realm of inner knowledge from any attempt to trace its origins to external knowledge, whether of sensations, corpuscles, or vibrations. Pascal's *Pensées*, emblemized by the famous dictum, "We know the truth not only by reason, but also by the heart," fits in line with the spiritualist tradition.²⁹ Finally, Rousseau dedicated his eighteenth-century writings to understanding himself by means of the *lumière intérieure*. For Rousseau, humans' own reflective power, and not their senses, reveals their true nature. These *méditatifs intérieurs* stood at odds with French materialist thinkers who denied the dualism between spirit and matter, such as Diderot, who famously described living spirit in *Le Rêve de d'Alembert* (1769) as an assemblage of matter *en masse*. The clearest system of materialist thought came in what Condillac called sensationalism, his elaboration of John Locke's empiricism. Condillac's figure of the insentient statue, which acquired its individual senses and ideas through repeated sensations, represented the zenith of anti-spiritualist thought in France.

The consolidation of French spiritualism as a distinct lineage took place in the nineteenth century. Marie-François-Pierre Gonthier de Biran, called Maine de Biran,

²⁹ Blaise Pascal, *The Thoughts, Letters, and Opuscles of Blaise Pascal*, trans. O.W. Wight (New York: Hurd and Houghton, 1869), 26.

inaugurated the movement. What made Biran's philosophy *spiritualist* was his conception of psychology as the window onto the absolute. The activity of consciousness, illuminated by psychological introspection, is part of the very fabric of reality; according to Biran, it is the world viewed, as it were, from the inside. The specific activity that Biran made the object of his spiritualism was the experience of motor effort. Biran dedicated his *L'Influence de l'habitude sur la faculté de penser* (1802), one of only two books he managed to publish during his lifetime, to the problem of how humans develop an immediate sense of self from repeated corporeal exertion. In line with the empiricist tradition, Biran affirmed sensations as the source of consciousness. Yet, he departed from that tradition by identifying the active sensation of muscular effort, and not passive sensations received from the external world, as the unique source of immediate self-knowledge. Biran's treatise on habit originated a positivist trend within spiritualism, which, according to Jerrold Seigel, "took the evidence of mental activity itself as a basic fact of psychology, thus challenging the materialist assumption that the primary phenomena of mental experience were sense-impressions, whose causes lay outside the subject."³⁰ Biran established the metaphysical prerogative, adopted most forcefully by Victor Cousin, to pierce through the internal activity of immaterial reality, in opposition to the physical sciences, which analyze the external activity of material reality. But Biran and Cousin diverged in their respective accounts of the relation between science and consciousness.

³⁰ Seigel accurately accounts for Maine de Biran's significance as a thinker recognized only later in the nineteenth century in *The Idea of the Self: Thought and Experience in Western Europe since the Seventeenth Century* (Cambridge: Cambridge University Press, 2005), 251.

Whereas Biran posited the will as the centerpiece of his spiritualist positivism,³¹ Victor Cousin established the intellect as the pillar of his eclectic spiritualism. In fact, Cousin monopolized spiritualism for much of the nineteenth century. He oversaw the official philosophy curriculum in France from 1830 to 1851, and his influence persisted well beyond his death in 1867. Cousin conceived psychology as an introspective study that paved the high road to ontology by examining the faculties of consciousness – sensation, reason, and the will – using metaphysical methods culled from the history of Western philosophy. These methods were *eclectic*, as Donald Kelley highlights, because “history in effect took precedence over unassisted and unencumbered reason and became ‘first philosophy’.”³² As Jan Goldstein documents, Cousin’s disciples “constructed their psychology around an immaterial self, or *moi*, that (they insisted) was given to its possessor whole and a priori,”³³ a notion, which, she argues, underwrote the bourgeois masculine ideology of post-Revolutionary France. Eclectic spiritualism was an anti-scientific approach to the study of consciousness inculcated by educators. “Such a construction,” Goldstein continues, “avoided the insidious undermining of the self that, in their opinion, resulted from hitching psychology to biology.”³⁴ Although Goldstein aptly documents the wide reach of Cousin’s pedagogical-political power, exercised from his influential position atop the Université de Paris, she fails to appreciate the spiritualist reaction to his reign. My dissertation resuscitates these post-Cousinian thinkers, Bergson

³¹ Biran’s priority of the will over the intellect is at the center of Susan Stebbins’ claim that French spiritualism was a proto-pragmatism. See *Pragmatism and French Voluntarism, with especial reference to the notion of truth in the development of French philosophy from Maine de Biran to Bergson* (London: Cambridge University Press, 1914).

³² Donald Kelley, *The Descent of Ideas, The History of Intellectual History* (Burlington, VT: Ashgate, 2002), 9; also see Donald Kelley “Eclecticism and the History of Ideas,” *Journal of the History of Ideas* 62, no. 4 (2001): 577-592.

³³ Jan Goldstein, *The Post-Revolutionary Self: Politics and Psyche in France, 1750-1850* (Cambridge: Harvard University Press, 2005), 6.

³⁴ *Ibid.* 6.

chief among them, who sought to reanimate their spiritualist commitments by overthrowing Cousin's antipathy toward the sciences.

It has become a conventional narrative for historians and philosophers to frame French spiritualism as a linear filiation from Biran to Bergson by way of Cousin. Dominique Janicaud's *Une généalogie du spiritualisme français*, despite being the most penetrating study of the lineage, erroneously arranges Biran and Bergson as its bookends.³⁵ Janicaud and many apt scholars have ascertained the family resemblances shared between these thinkers,³⁶ correcting historical surveys, most notably François Châtelet's magisterial eight-volume *Histoire de la Philosophie*, which present Bergson as a singular figure.³⁷ But the linear historiographical framework of these studies nonetheless neglects the discontinuous receptions that steered the development of French spiritualism. The nineteenth century, I want to suggest, did not witness one current of French spiritualism, but two. The first was the eclectic spiritualism of Cousin; the second was the scientifically revived spiritualism led by Bergson.

New periods claim new origins. My argument is that Biran became a *post factum* point of departure for French spiritualism in large part thanks to his revival in the hands of scientific spiritualists in the late nineteenth century. These thinkers found in the posthumous publication of Biran's writings, especially his medical essays, an

³⁵ Dominique Janicaud, *Une genealogie du spiritualisme français. Aux sources du bergsonisme: Ravaisson et la métaphysique* (Le Haye: M. Nijhoff, 1969); later re-edited and published as *Ravaisson et la métaphysique. Une généalogie du spiritualisme français* (Paris: Vrin, 1998).

³⁶ See Ben-Ami Scharfstein, *Roots of Bergson's Philosophy* (New York: Columbia University Press, 1943); George Boas, "Bergson and His Predecessors," *Journal of the History of Ideas* 20, no. 4 (1959): 503-514; F.C.T. Moore, *The Psychology of Maine de Biran* (London: Cambridge University Press, 1966); Andrea Bellantone, "Coup d'œil sur Bergson et le spiritualisme français" in *Actualité d'Henri Bergson*, ed. Tamás Ullmann and Jean-Louis Vieillard-Baron (Paris: Archives Karéline, 2012), 85-100.

³⁷ François Châtelet, *Histoire de la philosophie, Tome 6: La du monde scientifique et industriel, de 1860 à 1940* (Paris: Hachette, 1973). For an extreme example of Bergson's singular treatment, Alexis Philonenko claims, "Bergson inherited nothing, for the simple reason that before him there was nothing" in *Bergson ou de la philosophie comme science rigoureuse* (Paris: Cerf, 1994), 27.

alternative spiritualist archive amenable to a rapprochement with advances in experimental psychology. This is not to say that the publication of Biran's posthumous work *caused* the scientific turn in French spiritualism. Rather, my claim is that scientific spiritualism formed in large part as a readership around Maine de Biran's fragmentary corpus, which, as one commentator aptly describes, "is more to be compared to a Chinese painted scroll whose significance emerges as it is unwound, than to a simple wall picture of the West."³⁸ Although Maine de Biran's writings predated Cousin's from the beginning of the century, his significance as an origin for the new spiritualism would be retroactively installed toward the end. In this light, Maine de Biran's belated reception from beneath Cousin's legacy testifies to John Pocock's characterization of intellectual history: "Appropriation and expropriation are important aspects of what we have to study."³⁹

The term "scientific spiritualism" is my own. It consolidates the various titles attributed to those thinkers who self-consciously rejuvenated the spiritualist tradition with methods drawn from the sciences. The philosopher Gustave Belot heralded the movement as a "new spiritualism."⁴⁰ One critic dubbed the period "neo-materialism," suggesting that among its proponents "these three notions are combined and gathered: fundamental contingency, unlimited becoming, internal life anterior to intelligence and intelligibility - creator of one and the other; with them we end up with the product – the new philosophy

³⁸ George Boas, *French Philosophies of the Romantic Period* (Baltimore, MD: Johns Hopkins University Press, 1925), 63.

³⁹ J.G.A. Pocock, "The concept of a language and the *métier d'historien*: some considerations on practice," in *The Languages of Political Theory in Early Modern Europe*, ed. Anthony Pagden (New York: Cambridge University Press, 1987), 24.

⁴⁰ Gustave Belot, "Un Nouveau Spiritualisme," *La Revue philosophique* T. 44 (1897): 182-99.

– which represents the exact antipode of rationalism.”⁴¹ Bergson best described the impulse he shared with other thinkers to leap beyond the sciences and advance what he called a “positive metaphysics”:

Let us work to grasp experience from as close as we can. Let us accept science with its current complexity, and let us recommence, with this new science as our raw material, an analogous effort to that which the old metaphysicians carried out on a much simpler science. We need to break out of mathematical frameworks, to take account of the biological, psychological, and sociological sciences, and on this broader base construct a metaphysics that can go higher and higher through the continual, progressive, and organized effort of all philosophers, in the same respect for experience.⁴²

Scientific spiritualists shared Bergson’s project of culling insights from the sciences in order to describe the dynamic activity of consciousness. In 1874, Émile Boutroux set the movement in motion with *De la contingence des lois de la nature*, which argued that freedom is not an exception to the mechanistic worldview, but immanent to the causal order of nature. Subsequent thinkers reconciled scientific developments with the autonomy of consciousness, including Alfred Fouillée, the philosopher of *idées-forces*, who composed a magisterial corpus excavating the spiritualist dimensions of evolution, psychology, and sociology; Jean-Marie Guyau, France’s literary Nietzsche and critic of positivist currents in sociology and psychology in *La Morale anglaise contemporaine* (1879) and *La genèse de l’idée de temps* (1890); Maurice Blondel, the Catholic spiritualist who rejuvenated faith using developments in experimental psychology in *L’Action* (1893) and precipitated the surge of early twentieth

⁴¹ “Rationalism” signified the philosophy of Herbert Spencer, Alexander Baine, and Hypollite Taine, which, the author charged, followed the laws of the understanding. Jacob, “La philosophie d’hier et celle d’aujourd’hui,” *Revue de Métaphysique et de Morale*, T. 6, No. 2 (1898), 177.

⁴² Henri Bergson, “Psychophysical parallelism and positive metaphysics,” trans. Jean Gayon, in *Continental Philosophy of Science*, ed. Gary Gutting (Oxford: Blackwell, 2005), 68, originally published as “Le parallélisme psycho-physique et la métaphysique positive,” *Bulletin de la Société Française de Philosophie*, no. 2 (1901): 33-71.

century Catholic Modernism; and Édouard Le Roy, whose popular series of articles, “La science et la philosophie” (1899-1900), solidified *Bergsonisme* as a scientifically credible position. These seminal works defined the scientific spiritualist movement that rallied further contributions of a host of other minor thinkers.

My goal is to give shape, at once personal and conceptual, institutional and intellectual, to scientific spiritualism. I do so by presenting the ideas contained in the books and articles of these more or less forgotten thinkers and by reconstructing their relationships around manuscripts, letters, marginalia, library records, diaries, and course notes. My dissertation thus stages what Quentin Skinner calls a “dialogue between philosophical discussion and historical evidence.”⁴³ Within this tightly woven fabric of relationships, scientific spiritualists constituted a moment defined not by its definitive position, nor by its members’ individual genius. Rather, my claim is that a shared problem held scientific spiritualism together as a distinct movement. These thinkers sought to revitalize the philosophical and religious study of consciousness on the basis of the sciences that jeopardized the authority of philosophy and religion.

In his recent *La philosophie en France au XX^e siècle*, Frédéric Worms elevates Bergson’s understanding of the *problems* that give philosophy meaning to a historiographical method. Worms does not organize the history of French philosophy around a series of positions, but a series of problems that lent purchase to divergent historical moments. He identifies the “problem of spirit” as the grounding moment of the twentieth century.⁴⁴ Bergson’s conception of the problem, according to Worms, was not to have presented consciousness as a dimension of reality opposed to another physical,

⁴³ Quentin Skinner, “Meaning and Understanding in the History of Ideas,” *History and Theory* 8, no. 1 (1969): 49.

⁴⁴ Frédéric Worms, *La philosophie en France au XX^e siècle* (Paris: Gallimard, 2009), 31-64.

material, or natural dimension; Bergson identified the problem of spirit *within* the sciences of his time. My dissertation follows both Worms' organization of the period and his description of the problem that gave it shape. But I aim to go beyond his study by expanding the problem of spirit to include thinkers preceding and following Bergson who sought to articulate anew the nature of conscious activity.

A Counter Narrative for the Fin de Siècle

Scientific spiritualists' engagements with natural and human sciences expose the cracks in the historiographical narrative that the fin de siècle emerged out of a crisis in Western thought animated, above all, by a "revolt against positivism." When H. Stuart Hughes originally crafted the narrative in 1958, he employed "positivism" to designate the culture of scientism,⁴⁵ characterized by the belief, ascendant following the revolutions of 1848, that the mechanistic principles of matter and motion originally developed in the physics of René Descartes and Isaac Newton, and subsequently perfected by naturalists such as Antoine Lavoisier and Ludwig Büchner, could exhaustively explain the laws of nature and humans' place within them. Against this intellectual backdrop, Bergson instigated a "radical opposition" to science, "his main intellectual stock-in-trade, and there would have been no point in his allowing it to be whittled away by a more

⁴⁵ Hughes uses the term "positivism" "to characterize the whole tendency to discuss human behavior in terms of analogies drawn from natural science," in *Consciousness and Society*, 37. Yet, as W.M. Simon argues, positivism, in the strict sense of Comte's "conception of the world and of man," once à la mode in the mid-nineteenth century, struggled to find faithful academic adherents by the 1890s – the generation that, according to Hughes, led the revolt. Comte did enjoy posthumous cultural popularity. But the intellectual purchase of French thinkers who self-consciously carried forth his legacy, such as Hippolyte Taine and Ernest Renan, gave way to scientific research in psychology no longer appealing to the cultic values of positivism. By the 1890s, it was hardly worth revolting against. W.M. Simon, *European Positivism in the Nineteenth Century* (Ithaca: Cornell University Press, 1963).

conciliatory attitude.”⁴⁶ Bergson’s exploration of the so-called “irrational” dimension of reality, which for Hughes constituted the subjective or “emotional” aspect of experience occluded by the positivist worldview, rallied modernist figures in the decade of the 1890s such as Sigmund Freud, Carl Jung, Wilhelm Dilthey, and Georges Sorel. Their revolt installed consciousness as the centerpiece of the human sciences, what Hughes described as “the subjective attitude of the observer of society,”⁴⁷ and laid the conceptual groundwork for figures such as Émile Durkheim and Max Weber to found the modern social sciences. The merit of *Consciousness and Society* was its demonstration that the chief thinkers of the fin de siècle did not rebel against the values of the Enlightenment, but against its distortion in the form of positivism. Yet, Hughes bestowed historians with an enduring narrative that specifically fails to account for Bergson’s profound debt to the sciences and generally neglects the transformative dialogue that modernist thinkers forged with the sciences.

Hughes was not the first to oppose Bergson to the sciences. John Herman Randall Jr. had already situated Bergson in reaction against the “growing world of mechanism and naturalism” in *The Making of the Modern Mind*.⁴⁸ In early twentieth-century Europe, Bergson came to be seen as a mystical thinker, an accusation propagated on both sides of the political spectrum by the polemicists Julian Benda and Paul Nizan. Benda published three books between 1912 and 1914 skewering the explanatory power of Bergson’s philosophy. With more trenchant derision, Nizan identified Bergson as one of *guard dogs*

⁴⁶ H. Stuart Hughes, *Consciousness and Society*, 107.

⁴⁷ *Ibid.*, 15.

⁴⁸ John Herman Randall Jr., *The Making of the Modern Mind* (New York: Columbia University Press, 1926), ch. 21.

of French idealism against “realist” political involvement.⁴⁹ In a more charitable fashion, René Berthelot was the first to systematically identify Bergson’s thought as representative of the turn to the twentieth century. Alongside Nietzsche, Henri Poincaré, and William James, Berthelot situated Bergson as one of the “Romantic utilitarians” in his three-volume history of the pragmatist movement. All four thinkers, according to Berthelot, demonstrated an “anti-intellectualism” that did not outright oppose the natural sciences so much as re-conceptualize the notion of truth on which their laws are constructed. But Berthelot’s study firmly installed Bergson within a complementary narrative of aesthetic modernism:

Bergsonisme, when considered both in the thought of its master and its disciples, is a close relative to the impressionist symbolism that seduced an entire generation of French poets and musicians for the last twenty years. Bergsonisme is a philosophical “Debussyism.”⁵⁰

Berthelot set in motion the modernist narrative within which art historians have situated Bergson. Mark Antliff, for example, examines the Cubist, Rhythmist, and Futurist interest in Bergson, all of which found in his thought a critique of the quantitative constraints of Albertian perspective and of the analytic style of impressionism.⁵¹ Bergson’s place in aesthetic modernism continues to inform historiographies on this side

⁴⁹ Paul Nizan, *Les Chiens de garde* (Paris: Rieder, 1932).

⁵⁰ René Berthelot, *Un Romanisme utilitaire, étude sur le mouvement pragmatiste*, Vol. 1 (Paris: Félix Alcan, 1911), 22.

⁵¹ Mark Antliff, *Inventing Bergson: Cultural Politics and the Parisian Avant-Garde* (Princeton: Princeton University Press, 1993), 168.

of the Atlantic.⁵² But this art historical narrative has served to buttress the obverse intellectual historical narrative, which treats Bergsonian irrationalism as a reaction against science.

Hughes lent historiographical traction to his narrative by framing the *fin de siècle* within the dyadic structure of positivism versus irrationalism. Hughes was correct, to be sure, in so far as Bergson did not champion unapologetic materialists, such as Herbert Spencer or Ernst Haeckel, who folded consciousness into an all-embracing physical monism. Yet the narrative misrepresents the stakes on which Bergson's critique of positivism hinged. Far from opposing positivism, understood, following Hughes, as a widespread scientific movement in European thought, Bergson sought to radically enlarge what counts as a positive fact. Bergson's generation, I am suggesting, intervened in the sciences by challenging their narrow methodologies, and more importantly, by contributing a multi-dimensional and practice-oriented conception of scientific knowledge.

My argument builds on historians' critiques of Hughes' method. David Lindenfeld contends that the "revolt against positivism" is a "misleading" label, given that many thinkers of the *fin de siècle* sought to revise the meaning of positive knowledge: the phenomenology of Franz Brentano and Edmund Husserl, for example,

⁵² For more examples of the aesthetic modernist narrative see: A.E. Pilkington, *Bergson and his Influence: A Reassessment* (New York: Cambridge University Press, 1976); Frederick Burwick and Paul Douglass, eds., *The Crisis in Modernism: Bergson and the Vitalist Controversy*, (New York: Cambridge University Press, 1992); Mary Ann Gillies, *Henri Bergson and British Modernism* (Montreal: McGill Queen's University Press, 1996); Hilary L. Fink, *Bergson and Russian Modernism, 1900-1930* (Evanston, IL: Northwestern University Press, 1998); S.E. Gontarski, Paul Ardoyn, Laci Marrison, eds., *Understanding Bergson, Understanding Modernism* (New York: Continuum, 2012); Todd Cronan, *Against Affective Formalism: Matisse, Bergson, Modernism* (Minneapolis: University of Minnesota Press, 2014); Anson Rabinbach's exceptional treatment of Bergson situates him at the crossroads of both narratives of intellectual and aesthetic modernism. According to Rabinbach, Étienne-Jules Marey's studies in human locomotion and invention of the chronophotographe "became the provocation for Duchamp's images and Bergson's reflections on art and time perception." *The Human Motor: Energy, Fatigue, and the Origins of Modernity* (Berkeley: University of California Press, 1992), 86.

incorporated extra-rational aspects of consciousness in the name of scientific philosophy.⁵³ Dorothy Ross advances the more challenging objection that “Hughes himself could not escape positivism’s identification of rationality with objectivity, understood as access to a reality independent of any particular human view of it.”⁵⁴ Writing in the aftermath of early twentieth-century logical positivism, and its summary dismissal of questions of value, Hughes too hastily “understood the subjectivity of the generation of the 1890s as emotion, irrationality, and “supra- or infra-rational values”.”⁵⁵ Jan Goldstein, moreover, has committed her oeuvre over the past two decades to inverting Hughes’ narrative by investigating “psychological modernism” in France, a term she initially employed to designate French psychiatric figures, Pierre Janet foremost among them, whose medical models of the psyche retained the residue of nineteenth-century spiritualism.⁵⁶ In place of a revolt against positivism, Goldstein frames the fin de siècle around the intractability of metaphysics, especially in the emergent human sciences.⁵⁷

Taken together, these challenges to Hughes’ historiographical narrative indicate that positivism ought to be understood not as a monolithic object of resistance, but instead, I want to suggest, as a site of conceptual contestation. By that I mean that positivism oriented the stakes of intellectual and cultural debates: late nineteenth-century

⁵³ David Lindenfeld, *Alexius Meinong and European Thought, 1880-1920* (Berkeley: University of California Press, 1980), 7-8.

⁵⁴ Dorothy Ross, “Introduction: Modernism Reconsidered,” in *Modernist Impulses in the Human Sciences, 1870-1930*, ed. Dorothy Ross (Baltimore: The Johns Hopkins University Press, 1994), 5.

⁵⁵ Ibid.

⁵⁶ Jan Goldstein, “The advent of psychological modernism in France: An alternate Narrative” in Ibid., 190-209.

⁵⁷ Jan Goldstein, *Console and Classify: The French Psychiatric Profession in the Nineteenth Century* (Cambridge University Press, 1987); “Bringing the Psyche into Scientific Focus: A Political Account,” in *The Cambridge History of Science*, vol. 7: *The Modern Social Sciences*, eds. Theodore Porter and Dorothy Ross (London: Cambridge University Press, 2003), 131-153.

thinkers, especially scientific spiritualists, vied over competing conceptions of the content and scope of positive facts, which, in their eyes, conferred scientific rigor on the study of consciousness.

Nowhere was this more evident than in Bergson's first book, fittingly titled, *Essai sur les données immédiates* [translated in English as the "immediate data"] *de la conscience*, which sought to grant first-person qualitative experiences the scientific legitimacy that experimental psychologists otherwise reserved for sensations measured by third-person observers. It was no stretch for Édouard Le Roy, Bergson's student, to dub Bergson's thought, "spiritualist positivism." This movement, "far from having been called from outside, as it were, by metaphysical and moral preoccupations," Le Roy wrote, "has appeared from the inside of science, under the pressure of its internal needs, and in contact with its very facts and theories."⁵⁸ In this light, scientific spiritualism can enrich historians' understanding of the *fin de siècle*, first, because of the movement's formidable challenge to Hughes' dyadic opposition between positivism and irrationalism; and second, because these thinkers' endeavor to dilate scientific methodologies they viewed as malleable unsettles the historiographical logic of crisis and its treatment of science as a static category.

Motivated by neither intellectual disillusionment nor moral anxiety, *pace* historiographies of the "crisis of reason,"⁵⁹ scientific spiritualists sought to mobilize research in experimental psychology and evolutionary biology, not in opposition to a monolithic domain of science, but rather, in opposition to competing conceptions of science, specifically the intellectualist conception advanced by neo-Kantians.

⁵⁸ Édouard Le Roy, "Un Positivism Nouveau," *Revue de Métaphysique et de Morale* T. 9, No. 2 (1901): 139.

⁵⁹ See J.W. Burrow, *The Crisis of Reason*.

Intellectualism holds that consciousness represents the world in conceptual form, and judges the validity of its representations. Against neo-Kantians' claim that consciousness amounts to an intellectual *act* of judgment, scientific spiritualists argued that consciousness amounts to a practical *activity* engaged in a shared natural and social world. Neo-Kantians espoused intellectualism in order to safeguard the sciences from impinging on the realm of freedom, whereas scientific spiritualists set freedom in continuity with nature. As a result, Neo-Kantianism treated the study of consciousness as a handmaiden to the sciences, pursued to elucidate scientific concepts' epistemological foundations, while scientific spiritualists, on the other hand, saw the study of consciousness as a frontier beyond the limits of science. If scientific spiritualists can be said to have staged a revolt, I am suggesting, it was a revolt against intellectualism, not against positivism.

The stakes of my argument, to be clear, do not only turn on the *veracity* of the crisis narrative, but also, and more importantly, on the *function* of the crisis narrative. Whereas the crisis narrative takes "science" for granted as a stable domain thrown into disrepute, over and against which fin de siècle thought emerged, I am suggesting that contestation functions to better explain the fluid debates over the meaning and scope of science that fueled scientific spiritualism.

Scientific Spiritualism Contra Intellectualism

My account of the dispute between scientific spiritualism and intellectualism borrows from James Kloppenberg, who has brought attention to the significant support

that neo-Kantianism gained in the late nineteenth century in opposition to what he calls the “radical theory of knowledge.”⁶⁰ The latter treated consciousness as a pragmatic and plastic activity, and advocated a *via media* between metaphysics and science. Certain radical theorists that Kloppenberg highlights, such as Alfred Fouillée, overlap with the configuration at the center of my dissertation. I see my dissertation as building on Kloppenberg’s insight that nineteenth-century attempts to unite scientific and metaphysical methods found opposition in the intellectualist current of thought. By focusing on local problems in France, intellectualism can best be understood as a tendency of thought at times even present in the work of scientific spiritualism. Scientific spiritualism and neo-Kantianism, that is to say, often manifested, not only as two philosophical movements, but also as divergent tendencies in French engagements with the natural and human sciences, even surfacing in tension with each other in works by the same author.

Scientific spiritualists’ critique of intellectualism aimed at overthrowing three interlocking dualities at the heart of Kant’s critical philosophy: the duality between nature and freedom; the duality between theoretical and practical reason; and the duality between spontaneity and receptivity. These were the three pillars of intellectualism.

⁶⁰ The thinkers that Kloppenberg identifies as proponents of the “radical theory of knowledge” are Wilhelm Dilthey, Thomas Hill Green, Henry Sidgwick, Alfred Fouillée, William James, and John Dewey. *Uncertain Victory: Social Democracy and Progressivism in European and American Thought, 1870-1920* (New York: Oxford University Press, 1988).

1) Nature and Freedom

The architectonic division that Kant drew between the domains of nature and freedom separated the laws determining human representations of the world from the laws regulating human conduct. The chasm between the two served to safeguard autonomy. If human autonomy cannot be represented in the natural world, then it cannot constitute an object of scientific inquiry uncovered by means of observation and experimentation. Humans exercise their freedom, Kant argued, by transcending the realm of nature and employing *a priori* concepts of the understanding to make judgments about nature. But freedom from nature comes at the expense of an absolute knowledge of nature. Kant presented this distinction in the epistemological terms of phenomena and noumena. On the one hand, the concepts of the understanding only apply to nature as it appears to consciousness, that is, as phenomena obeying causal laws. On the other hand, the concepts of the understanding foreclose any knowledge of an unconditioned, that is, noumenal nature existing apart from the form it assumes in consciousness. Kant employed the distinction to diagnose and dispel the illusions that ensue when humans seek to know unconditioned entities – such as the soul or God – existing beyond the laws of representation.

2) Theoretical and Practical Reason

The metaphysical division between the realms of nature and freedom entailed an epistemological division between theoretical and practical reason, manifest in Kant's

separation between his First and Second *Critiques*.⁶¹ Both theoretical and practical reasoning share the same capacity to systematize our knowledge, that is, to impart universality and necessity to representations. But they diverge in respect to the kind of knowledge each attains. Whereas theoretical reasoning facilitates judgments about the causal relationships in nature, typified in physics and geometry, practical reasoning constructs the moral relationships between humans. The division further served to safeguard human autonomy, since the normative principles determining morals cannot be derived from the causal principles determining natural processes. As Kant framed the distinction, the concepts of science determine the appearance of nature, whereas the concepts of morality determine the ends of human freedom. The highest principle of theoretical reason is self-consciousness, or what Kant called the unity of apperception, which endows experience with a necessary and universal form. The highest principle of practical reason is the moral law, or what Kant called the categorical imperative, which grounds the particular duties we owe to each other.

3) *Receptivity and Spontaneity*

According to Kant, knowledge consists of determining the relation of a concept to an object. Consciousness receives an object by means of intuition, and spontaneously unifies the object by means of concepts. These dual operations ensure that our

⁶¹ Kant did attempt to unite the realms of nature and freedom in the Third *Critique* by introducing judgment as a third faculty of reason in addition to theoretical and practical reason. Judgment invokes the moral law to impose purposes, or teleological principles, on nature. But Kant insisted that the purposes evident in nature, whether in art or in organisms, cannot be derived from nature. Judgment is not a determining faculty, in the sense that theoretical reason determines causal relationships and practical reasoning determines moral guidelines; rather, judgment is a reflective faculty that regulates how nature appears to us.

representations of nature are self-conscious, dependent not only on the capacity of consciousness to sense objects, but also on its capacity to issue judgments about objects. Receptivity and spontaneity therefore constitute the composite nature of our representations, the building blocks of knowledge.

Receptivity and spontaneity, as Kant made clear, are limited capacities peculiar to human consciousness. In order for an object to appear before us, we must be affected by the object. But if we were not finite creatures, and instead possessed what Kant called an “intellectual intuition,” then consciousness could furnish its own objects. The receptive capacity of our sensibility, however, is “derivative (*intuitus derivativus*) rather than original (*intuitus originarius*), and hence is not intellectual intuition.”⁶² Analogously, if the spontaneous power of the understanding were not limited to applying concepts, then it would be possible for the understanding to generate its own objects. But the concepts of our finite understanding only pertain to possible objects, meaning that the understanding can only work upon the objects presented in intuition. The spontaneous power of the understanding, Kant held, is discursive; it is confined to making judgments about objects.

Scientific spiritualists critiqued Kant’s interlocking divisions on epistemological and metaphysical grounds. On epistemological grounds, scientific spiritualists argued that the divisions between nature and freedom, and between theoretical and practical reason, unduly segregated metaphysical and scientific inquiry. “I know it has become fashionable among some thinkers, thanks to the excessive propaganda of Kantianism and especially French neo-Kantianism,” Alfred Fouillée wrote, “to transpose philosophy outside of

⁶² Immanuel Kant, *Critique of Pure Reason* 1787, trans. Norman Kemp Smith (New York: Palgrave Macmillan, 1929), B72.

science, under the pretext of placing it higher and making a place for belief.”⁶³ Since Kant held that freedom is peculiar to the normative realm, impervious to causal analysis, his critical philosophy foreclosed the possibility of investigating the natural bases of consciousness (in so far as thinking, neo-Kantians and spiritualist concurred, is a free activity). Philosophy’s proper relation to the natural sciences, as Kant conceived it, was to establish the foundations of scientific knowledge. Scientific spiritualists, however, envisioned an inverted relation between philosophy and the natural sciences: the sciences establish the foundation of philosophy, albeit a negative foundation, which philosophy aims to surpass by means of a speculative leap.

On metaphysical grounds, scientific spiritualists argued that the divisions between nature and freedom as well as between theoretical and practical reason followed from the false picture of consciousness that Kant enshrined in his division between receptivity and spontaneity. Kant unduly shackled the active powers of consciousness to applying concepts: “To know a reality in the ordinary meaning of the word “to know,”” Bergson wrote, “is to take ready-made concepts, apportion them, and combine them until one obtains a practical equivalent of the real.”⁶⁴ It followed, according to Bergson, that the Kantian account foreclosed consciousness’ creative power of inventing concepts:

[T]he whole of the *Critique of Pure Reason* leads to establishing the fact that Platonism, illegitimate if Ideas are things, becomes legitimate if ideas are relations, and that the ready-made idea, once thus brought down from heaven to earth, is indeed as Plato wished, the common basis of thought and nature. But the whole *Critique of Pure Reason* rests also upon the

⁶³ Alfred Fouillée, *La Conception morale et civique de l’enseignement* (Paris: Éditions de la Revue Bleue, 1902), 151.

⁶⁴ Henri Bergson, “Introduction to Metaphysics,” in *The Creative Mind*, trans. Mabelle L. Andison (Mineola, NY: Dover, 2007), 149; originally published as “Introduction à la métaphysique,” *Revue de métaphysique et de morale* 11, no. 1 (1903): 1-36. For more on Bergson’s critique of Kantianism, see Madeleine Barthélemy-Madaule, *Bergson, adversaire de Kant: étude critique de la conception bergsonienne du kantisme, suivie d’une bibliographie kantienne* (Paris: Presses universitaires de France, 1965).

postulate that our thought is incapable of anything but Platonizing, that is, of pouring the whole of possible experience into pre-existing molds.⁶⁵

Bergson and scientific spiritualists argued that by overthrowing neo-Kantian intellectualism, they could mend the division between science and metaphysics, all the while preserving human autonomy. Scientific spiritualists did so by advancing a rival account of consciousness as an experimental and practical activity. But neo-Kantians such as Léon Brunschvicg were resistant: “properly psychological action is not movement, it is judgment.”⁶⁶ Such were the stakes motivating scientific spiritualists’ dispute with intellectualism, which cast into stark relief an alternative historiographical narrative for the *fin de siècle*, structured around neither a revolt against positivism nor a crisis of science, but instead around contestations over the meaning and scope of the sciences.

Bergson and the Contemporary Brain Sciences

It may seem odd to historicize Bergson as a scientific thinker, given that he is widely remembered for having been amiss about physics in his infamous public debate with Albert Einstein in 1922.⁶⁷ Therein Bergson set the *durée* of conscious experience, the notion of time he developed in the *Essai* and *Matière et mémoire*, in confrontation with the theory of special relativity.⁶⁸ “It is regrettable that Bergson should be so

⁶⁵ Ibid., 166-7.

⁶⁶ Léon Brunschvicg, *Le progrès de la conscience dans la philosophie occidentale* (Paris: Felix Alcan, 1927), 716.

⁶⁷ For more on Bergson’s debate with Einstein see Jimena Canales, *A Tenth of a Second: A History* (Chicago: University of Chicago Press, 2009); Élie During, *Bergson et Einstein: La querelle du temps* (Paris: Presses universitaires de France, 2014).

⁶⁸ Bergson published his argument as *Durée et simultanéité: a propos de la théorie d'Einstein* (Paris: Felix Alcan, 1922).

thoroughly mistaken,” Einstein wrote following their encounter, “and his error *is really of a purely physical nature*, apart from any disagreement between philosophical schools.”⁶⁹

Perhaps Bergson’s error even lay at the origin of the contemporary “science wars,” a suggestion made by Alan Sokal,⁷⁰ the physicist who notoriously cast aspersion over the humanities’ lack of scientific rigor.⁷¹ Nonetheless, a growing body of recent scholarship has excavated Bergson’s engagements with the sciences during the late nineteenth and early twentieth century.⁷² I see my dissertation as building on this exciting trend by situating Bergson within the wider formation of scientific spiritualism.

My argument that Bergson wrote in response to the incipient natural and human sciences may lead some readers to suspect that I have at best vitiated the metaphysical splendor from the challenging concepts he forged, and at worst sullied the vivid and even literary style of philosophizing that he perfected. It is worth clarifying: I am not arguing that Bergson’s thought can be reduced to a reaction to the sciences. Rather, I see my dissertation as a sustained reading of the chapters of Bergson’s early books penned in scrupulous dialogue with scientific research, chapters that have largely gone neglected by a century of Bergson scholarship focused on the exclusively philosophical dimension of his thought. Bergson did rise above his philosophical milieu; and he managed to do so, I am suggesting, because of the care he took to so extensively cite scientific research and,

⁶⁹ Cited in Jimena Canales, “Einstein, Bergson, and the Experiment that Failed: Intellectual Cooperation at the League of Nations,” *Modern Language Notes* 120 (2005): 1179.

⁷⁰ Alan Sokal and Jean Bricmont, “Un regard sur l’histoire des rapports entre science et philosophie: Bergson et ses successeurs,” in *Impostures intellectuelles* (Paris: Odile Jacob, 1997) 166.

⁷¹ Alan Sokal wrote a fictitious journal article that he published to highlight what he saw as the nonsense of postmodern concepts and the lax standards of editorial boards in the field of cultural studies, “Transgressing the Boundaries: Towards a Transformative Hermeneutics of Quantum Gravity,” *Social Text* 46/47 (1996): 217-252.

⁷² See Alexis Philonenko, *Bergson, ou, de la philosophie comme science rigoureuse* (Paris: Cerf, 1994); Frédéric Worms, ed., *Annales bergsoniennes: Tome 3, Bergson et la science* (Paris: Presses universitaires de France, 2007); Olivier Perru, *Science et itinéraire de vie: la pensée de Bergson* (Paris: Kimé, 2009).

more importantly, because he so radically jettisoned the vestiges of intellectualism from the project of scientific spiritualism.

By historicizing Bergson's engagements with the sciences, I also hope that his thought might claim critical leverage on the writing of history today. A growing number of historians have recently turned to the neurosciences in order to rethink their discipline's epistemological foundations. Lynn Hunt and Daniel Lord Smail call for a new "neurohistory," while William Reddy and Barbara Rosenwein cite neuroscientific research in support of their investigation of the history of the emotions.⁷³ No longer restricted to the history of science and technology, interest in the neurosciences now animates bold claims in contemporary historiography. Smail, for example, advances a counter-history of the Enlightenment drawn from neuroscientific research on the cerebral effects of psychotropic mechanisms. He claims, "the progress of European civilization from the Middle Ages to modernity consists of a significant expansion or autotropic mechanisms available on the market."⁷⁴ Coffee, sugar, tobacco, alcohol, and chocolate are thus used as neuro-psychological causes to explain the explosion of intellectual debate that defined the era. These developments are both exciting and problematic.

The history of scientific spiritualists' engagements with the emergent sciences of the late nineteenth century might help to guide contemporary historians' engagements with the mature sciences of the twenty-first century. My dissertation thus stages a "history of the present." Although I am aware of the dangers of distorted readings that

⁷³ See Daniel Lord Smail, *On Deep History and the Brain* (Berkeley: University of California Press, 2008); Lynn Hunt, "The Experience of Revolution," *French Historical Studies* 32, no. 4 (2009): 671-678; William Reddy, *The Navigation of Feeling* (New York: Cambridge University Press, 2001); *The Making of Romantic Love: Longing and Sexuality in Europe, South Asia, and Japan, 900-1200 CE* (Chicago: University of Chicago Press, 2012); Barbara Rosenwein, *Emotional Communities in the Early Middle Ages* (Ithaca, NY: Cornell University Press, 2006).

⁷⁴ Daniel Lord Smail, *On Deep History and the Brain*, 179.

this kind of anachronism might produce, the chapter takes guidance from the insight of Richard Rorty, J.B. Schneewind, and Quentin Skinner: “If to be anachronistic is to link a past X to a present Y rather than studying it in isolation, then every historian is always anachronistic.”⁷⁵ Indeed, I see the conceptual stakes undergirding my history of scientific spiritualism as motivating an intervention in the present. That is, the history of scientific spiritualism serves to illuminate the salvageable core and pare the mistaken approaches in recent historiographies drawing from the contemporary brain sciences.

Organization of Chapters

Scientific spiritualism was neither a monolithic enterprise nor a disaggregated collection of thinkers, but a dynamic and transforming movement. I have organized my dissertation around the intellectual and cultural contexts that explain the formation, development, and significance of this movement. At an intellectual level, the six chapters follow the conceptual arc, divided into three moments, along which scientific spiritualists posited and debated the guiding problem of articulating the nature of conscious activity: motility, contingency, and pragmatism.⁷⁶ Early spiritualist thinkers, from Maine de Biran to Ravaisson, conceived conscious activity as a form of motor activity; subsequent thinkers, Émile Boutroux most notably, advanced contingency as the basis of conscious activity; and those writing on the eve of the twentieth century, such as Bergson, Fouillée,

⁷⁵ Richard Rorty, J.B. Schneewind, and Quentin Skinner, *Philosophy in History: Essays in the Historiography of Philosophy* (New York: Cambridge University Press, 1984), 10.

⁷⁶ Gabriel Madinier identifies conscious activity as a guiding theme in the history of nineteenth-century French spiritualism, see *Conscience et mouvement, étude sur la philosophie française de Condillac à Bergson* (Paris: Presses universitaires de France, 1938).

and Le Roy, conceptualized conscious activity as an experiential and action-oriented endeavor. At a cultural level, I have organized the chapters around five contexts: philosophical, scientific, institutional, religious, and finally, the present. These contexts reveal the pivotal transformation in the late nineteenth-century understanding of conscious activity, from an intimate relationship with one's self, to a public interaction with a shared social and biological world.

Chapters 1 and 2 present a pre-history of early nineteenth-century French spiritualism, taking as a point of departure the legacies of Biran and Cousin. I argue that scientific spiritualism in the late nineteenth century rejuvenated the Biranian philosophical archive against the Cousinian heritage. Chapter 1 contends that Biran advanced a conception of conscious activity as motility, or motor activity, which later thinkers radicalized in opposition to Cousin's conception of conscious activity as intellection. Chapter 2 analyzes the thought of Félix Ravaisson, Jules Lachelier, and Émile Boutroux who set the stage for scientific spiritualism in formulating what they called "spiritualist positivism," consisting of an expanded account of consciousness set within nature. They argued that contingency mediates both the structure of consciousness and its emergence from natural processes. These two concepts, motility and contingency, set the terms of scientific spiritualists' engagements with the sciences in the late nineteenth century.

Chapters 3 and 4 document the impact of experimental psychology. I examine how the emerging discipline, and the work of Théodule Ribot in particular, fueled scientific spiritualism. Ribot's *La Revue philosophique* was France's chief organ of experimental psychology as well as the premier outlet for academic philosophy. The

journal, I argue, constituted a reading community in which scientific spiritualism took form around two specific developments: psychophysics and psychopathology. Chapter 3 focuses on psychophysics, the science of measuring sensations founded by the German psychologist Theodor Fechner, which spurred a rich debate in France around the extent to which conscious states could be measured in quantitative terms. Chapter 4 addresses psychopathology, which aimed at discerning the laws of the healthy mind through the examination of abnormality. The field especially piqued the interest of French men and women following Ribot's series of articles in the *La Revue philosophique* claiming that memories could be localized in the brain.

Chapter 5 explores scientific spiritualism in the context of educational institutions. I focus on philosophy textbooks and course notes written by Bergson's students in order to trace the scientific turn in the official philosophy curriculum under the Third Republic and to demonstrate how scientific spiritualism was both brought about by and actively oriented French academe. From 1874 to 1902, the French Ministry of Public Instruction introduced scientific psychology in secondary education by inculcating neurophysiology and disseminating research in psychopathology. These reforms, I argue, mobilized the philosophy course as a vehicle to promulgate scientific instruction and promote technological progress in order to compete with Germany and simultaneously to steer the cultural resonance of the emergent brain sciences. The reforms also cast light on Bergson's success at integrating spiritualist philosophy and psychological research in the classroom, which accounts in large part for the fame he achieved.

Chapter 6 argues that the pragmatist moment in scientific spiritualism reached its zenith in the context of religious debates surrounding Catholic Modernism. The crisis in

the Church exploded as progressive theologians advocated historicist and pragmatist methods for interpreting Catholic doctrine. I devote the bulk of the chapter to Le Roy's debate with Blondel around these issues in published articles as well as in personal correspondences. Both took aim at the same problem, which was how to give meaning to religious dogma on the basis scientific spiritualists' conception of consciousness. Both, that is, drew from advancements in the sciences as well as their respective critiques the intellectualism. Blondel and Le Roy thus extended scientific spiritualism into the realm of religion by simultaneously advancing a fully social account of conscious activity.

The Epilogue brings the history of scientific spiritualism to bear on contemporary efforts in the humanities and social sciences to stage a new rapprochement with the neurosciences and sociobiology. I contend that the dialogue scientific spiritualists forged with the nascent scientific psychology and evolutionary theory offers an illuminating position from which to critique contemporary efforts to broach a similar dialogue today. For humanists who came of age in the midst of social and linguistic constructivism, new "neurocultures" offer novel and exciting accounts of human and non-human creativity and historicity that overthrow what many had felt as a post-structuralist injunction to limit their theoretical horizons to the textual frames imported from literary studies. The discipline of history now experiences, according to Gabrielle Spiegel, "a form of backlash against postmodernist/poststructuralist thought, with its insistence on the mediated, indeed constructed, nature of all knowledge, and most especially knowledge of the past."⁷⁷ The neurosciences offer one, though not the only, means to move beyond the perceived exhaustion of the linguistic turn.

⁷⁷ Gabrielle Spiegel, "Memory and History: Liturgical Time and Historical Time," *History and Theory* 41, no. 2 (2002): 149-162.

Yet, historians remain undecided and at times conflicted about what division of labor they hope to achieve between historical criticism and scientific experimentation. Left unresolved, the problem of biological reductionism resurges anew. Forceful critiques of this reductionism have emerged among historians. For example, Fernando Vidal succinctly identifies the reductionist presupposition of neurocultures as, “the mind is what the brain does.”⁷⁸ Ruth Leys has also subjected this presupposition to a nuanced critique in what she sees as “recent attempts to naturalize contemporary politics and culture by linking them to the brain sciences.”⁷⁹ My aim is to contribute to these debates by suggesting that scientific spiritualists’ project, which engaged the sciences to yield new problems surpassing the reach of the sciences, can help clarify what is still a hazy relationship between history and the neurosciences.

⁷⁸ Fernando Vidal, “La Neuroesthétique, un eshétisme scientist,” *Revue d’Histoire des Sciences Humaines* 2, no. 25 (2011): 239-264.

⁷⁹ Ruth Leys, “On Catherine Malabou’s *What Should We Do with Our Brain?*,” *Nonsite* 2 (2011), accessed 1 June 2013, <http://nonsite.org/issues/issue-2/on-catherine-malabous-what-should-we-do-with-our-brain>; for a more expansive critique, see “The Turn to Affect: A Critique,” *Critical Inquiry* 37 (2011): 434-472.

Part I

From Motility to Contingency The Emergence of Nineteenth-Century French Spiritualism

The history of French spiritualism has been largely written as a linear march across the nineteenth century from Maine de Biran to Henri Bergson. Bergson acknowledged his affinity with “the master idea of Maine de Biran that had accompanied the nineteenth century, the idea of concentrating philosophy’s attention on the interior life of the soul, of situating human personality, as it appears to consciousness, half way between the relative and the absolute of ancient metaphysics, higher than the phenomenon of Kantians, but lower than their thing in itself.” For Bergson, Biran held the key to “experimentally penetrating the beyond, our at least approaching its threshold, by taking interior observation as a guide.”¹ Biran oriented French spiritualism around the project of articulating the inner activity of reality as it is experienced by consciousness. Although the conceptual problem around which both Biran and Bergson converged turned on what this activity amounts to, Biran only became a historically influential figure in the late nineteenth century.

It has become a standard narrative to situate Biran and Bergson as bookends of the nineteenth-century spiritualist itinerary.² This straight and narrow path informs the

¹ Henri Bergson, “Rapport sur le prix Bordin à décerner en 1905: Mémoires sur Maine de Biran,” in *Écrits et paroles*, Vol. 2, ed. R.-M. Mossé-Bastide (Paris: Presses universitaires de France, 1959), 245.

² See Ben-Ami Scharfstein, *Roots of Bergson’s Philosophy* (New York: Columbia University Press, 1943); Henri Gouhier, “Maine de Biran et Bergson,” in *Les Études bergsonniennes*, vol. 1 (Paris: A. Michel, 1948), 129-173; George Boas, “Bergson and His Predecessors,” *Journal of the History of Ideas* 20, no. 4 (1959): 503-514; Jean Beaufret, *Notes sur la philosophie en France au XIXème siècle*, Maine de Biran à Bergson (Paris: J. Vrin, 1984).

most probing study, Dominique Janicaud's genealogy of French spiritualism.³ But this narrative neglects the discontinuous receptions that steered the development of French spiritualism. The central historical claim of this section is that the nineteenth century did not witness one current of French spiritualism, but two. The first was the old spiritualism of Maine de Biran and Victor Cousin, and the second was the new, scientifically revived spiritualism that Bergson popularized by the turn to the twentieth century. But it was only in reaction against Cousin's official spiritualism that Biran's subterranean spiritualism would receive due attention, unearthed as it was from beneath the Cousinian legacy. The old spiritualism, in this light, appears less as a monolithic point of resistance against which scientific spiritualism emerged, and more as a fluid archive that disobeyed a straightforward chronological progression.

New movements claim new origins. Although Biran has been historicized as the inaugural figure in French spiritualism, I am suggesting that his thought functioned as a *post factum* point of departure. Biran's writings remained occluded by Cousin's official state philosophy for much of the nineteenth century, posthumously trickling from diverse publishing houses. Formulated in the post-Revolutionary era, Biran's thought had to wait until the post-Cousinian era before it blossomed, offering scientific spiritualists a conceptual toolkit sturdy enough to defend the autonomy of consciousness while sufficiently adaptable to experimental research on areas such as the nervous system, visual perception, and brain anatomy. Scientific spiritualism emerged during the late nineteenth century in large part as a reading community around Biran's work. The

³ See Dominique Janicaud, *Ravaisson et la métaphysique. Une généalogie du spiritualisme français* (Paris: Vrin, 1998), originally published as *Une généalogie du spiritualisme français. Aux sources du bergsonisme: Ravaisson et la métaphysique* (Le Haye: M. Nijhoff, 1969).

emergence of scientific spiritualism, and its divergence from Cousin's eclectic spiritualism, is therefore, as I will trace, a reception history of Biran's work.

The following two chapters examine the formation of French spiritualism in two distinct moments. The first analyzes Biran and Cousin, and the rift they imparted to the old spiritualism between two respective conceptions of consciousness: motility and intellectualism. The second chapter traces the revival of Biran's concept of motor activity following the demise of Cousin's monopoly over academic philosophy. These post-Cousinian thinkers, namely, Félix Ravaisson, Jules Lachelier, and Émile Boutroux, received Biran's motility as a philosophy of contingency.

Chapter 1: Maine de Biran, Victor Cousin, and the Contest Over the Meaning of French Spiritualism

In advancing a new spiritualist movement, thinkers in the final quarter of the nineteenth century self-consciously strove to overcome the old spiritualism monopolized by Victor Cousin. Cousin's brand of eclectic spiritualism dominated French academic life for the greater part of the century. Still after his death in 1867, influential disciples of Cousin such as Elme Caro, Paul Janet, and Léon Ollé-Laprune continued to occupy the philosophy chairs of the Université de Paris. Although a budding generation of scientific spiritualists were frustrated by what they saw as Cousin's tyranny over academic philosophy as well as his hostility to commingling philosophy and the sciences, they nonetheless strove to preserve the animating tenets of the French spiritualist tradition. In their effort to stage a rapprochement between an updated spiritualism and developments in the natural and human sciences, these thinkers turned to the posthumous writings of Maine de Biran. This independent philosopher of post-Revolutionary France never held an academic post and published little in his lifetime. But the gradual appearance of his works flowed like an alternative spiritualist current to Cousin's legacy. In parting ways with Cousin, their spiritualist father, scientific spiritualists reunited with Biran, an estranged grandfather.

What defined Cousin's and Biran's thought as *spiritualist* was their conception of psychology as the window onto the absolute. The activity of consciousness illuminated by psychological introspection is part of the very fabric of reality; it is the world viewed, as it were, from the inside, and not a view set over and against the world, as subjectivism or phenomenism would hold. Spiritualists aspired to pierce through the internal activity

of immaterial reality, in opposition to the physical sciences, which analyze the external activity of immaterial reality. But Biran and Cousin diverged over their distinct accounts of what conscious activity amounts to.

Cousin believed that conscious activity opens onto the realm of reason. He promoted psychology as a *science humaine* that revealed the organizing principles of thought by introspection – that is, by directing philosophical analysis away from the objects of the external world and inward toward the objects of consciousness. For Cousin, consciousness constituted a substance, no less real than the entities inhabiting the physical world. Cousin adopted this approach from Descartes, who conceived *res cogitans* as an ensemble of mental objects marked by their features of clarity and distinctness. Psychology, according to Cousin, “is the thought folding back upon itself, and contemplating the spectacle presented by itself.”¹ When exercised properly, introspection would reveal the universal principles of reason enabling particular acts of thought. Cousin was a thoroughgoing idealist. Reason, he argued, is not merely a subjective feature of consciousness; reason is the objective structure by which the world presents itself to thought. Cousinian spiritualism thus pursued psychology as the surest route to ontology.

What made Cousin’s approach *eclectic* was his reliance on the history of philosophy. Cousin claimed to derive his brand of eclectic spiritualism from the superior elements of the Western canon. In practice, this amounted to synthesizing the systems of the seventeenth and eighteenth centuries – namely those of John Locke’s empiricism, Thomas Reid’s common sense philosophy, and Kant’s transcendental idealism – in order to arrive at a rational science of psychology. By studying the greatest minds of the past,

¹ Victor Cousin, *Fragments philosophiques* (Paris: Ladrangue, 1838), 397.

the student of eclectic spiritualism was meant to secure the foundations of reason for the nineteenth century.

Biran's account of conscious activity was markedly different. At the heart of Biran's oeuvre is the guiding principle that consciousness is an energetic, rather than intellectual, kind of activity. Whereas psychology, for Cousin, analyzed mental acts that invoke principles of reason, Biran employed psychology to analyze mental activity as an exercise of the will. Thinking, according to Biran, is an activity that summons the body's energy and manifests in the feeling of effort. At bottom, this line of thought belonged to the empiricist tradition, which affirmed sensations as the source of ideas. Biran, however, argued that effort is a unique kind of sensation. In exerting muscular effort, one actively invokes the body's energy, which is a form of sensation distinct from the sensations received from objects in the material world. Biran's spiritualism construed the exercise of effort as a window onto the absolute: in consciously directing my body's energy, I open myself onto the internal and energetic activity of reality itself.

The master-concept that Biran employed to designate the activity of consciousness was *le sentiment de l'effort musculaire*, the sensation of muscular effort. For Cousin, it was *le sens intime du moi*, the immediate sense of self. These approaches, the former corporeal, the latter intellectual, animated the rift separating Biran's empiricist spiritualism and Cousin's eclectic spiritualism. This rift turned on competing conceptions of psychology and spirit:

- 1) Psychology as an *act* of intellection vs. psychology as a motor *activity* of willing.

- 2) Spirit as the rational being of reality vs. spirit as the energetic becoming of reality.

In what follows, I will first present the historical genesis of this rift, and then analyze its conceptual stakes.

Spirit Divided

The historical rift between two spiritualisms extends back to the first meeting between Cousin and Biran at the metaphysical society that Biran organized in his Paris home in 1814. It was there where Biran found sanctuary amidst the tumult of the Bourbon reclamation of the throne. Biran had spent his life in politics. Wounded in the battle of Versailles in 1789, Biran served a formidable career in various state roles under Napoleon: administrator of Dordogne, deputy in the Council of Five Hundred under the Directory, legislator under the Empire, and member in the Chamber of Deputies during the Restoration. From 1813, Biran served on the Commission of Five, charged with studying the documents justifying the Emperor's power. No sooner had Biran submitted his report to the Legislative Corps than Napoleon dissolved its powers in anticipation of the military siege that would ensue. In the wake of the Treaty of Paris, Biran convened in his home some of the greatest philosophical minds of Paris: the naturalists Georges and Frédéric Cuvier, the philosophers Joseph-Marie Degérando and Pierre-Paul Royer-Collard, the physicist André-Marie Ampère, and the future Prime Minister, François Guizot.² Each fortnightly *séance* featured the presentation of a paper followed by discussion. And by 1816 the metaphysical society included among the attendees the

² Henri Gouhier, *Les Conversions de Maine de Biran* (Paris: J. Vrin, 1948), 226.

young Cousin, whose “passionate mind,” as Biran later recounted, fueled “nothing less than the hope for a true philosophy among us.”³

Biran’s metaphysical society was one of many intimate settings where early nineteenth-century French spiritualism thrived in the form of conversation. Biran hopped between philosophical milieus depending on his political positions. Under the Directory, he frequented the *salon* of Madame Helvétius before serving as an appointed deputy of the Southwestern town of Bergerac, where, outside his administrative duties, he organized a medical society that gathered physiologists and physicians as well as philosophers and geographers. It was in these exclusive cultural enclaves that Biran shared his writings, with little ambition that they circulate among a mass readership.

Cousin, for his part, regularly attended the *salon* of Madame de Staël, well known for gathering literary figures alongside aristocrats who came to learn the names Kant, Jacobi, Herder and Fichte. De Staël travelled to Germany in 1803 and 1807 and compiled her reflections on the nation’s transcendental philosophy in *De l’Allemagne* (1810), a book quickly censored for allegedly adding fuel to the fire of France’s perpetual conflicts beyond the Rhine. Cousin was indebted to de Staël for having illuminated a philosophical path beyond the eighteenth-century sensationalism of Condillac that dominated French philosophical circles at the time. “She opened up the doctrine so dear to Cousin,” one critic reflected, “by treating nearly all philosophers preceding [Kant] as materialists, some for having frankly espoused it, and others for having been committed to it without knowing.”⁴ Kant had previously found a foothold in France as early as 1797 thanks to the affable Wilhelm von Humboldt, who made his way into the philosophical circle at the

³ Maine de Biran, entry of January 15, 1821, *Maine de Biran, sa vie et ses pensées*, ed. Ernest Naville (Paris: Joel Cherbuliez, 1857), 243-244.

⁴ Charles Adam, *La Philosophie en France* (Paris : Félix Alcan, 1894), 22-23.

recently created Institut de France.⁵ But it was Cousin who, following his voyage to Leipzig in 1817, was the first Frenchman to champion Kant's thought when he lectured on transcendental philosophy in the 1820s at the Sorbonne.⁶

These informal societies and *salons*, starkly different from the academic institutions philosophers occupied in the late nineteenth century, incubated the divergent paths of French spiritualism. Whereas Biran imbibed philosophy alongside the scientists of French nobility, Cousin assimilated writings from beyond *l'hexagone*. The genetic divergence between Biran's and Cousin's brands of spiritualism turned on their respective development out French medical thought, on the one hand, and German transcendental philosophy, on the other. But the social contexts of these spiritualisms were equally important for the ends they served. If spiritualist philosophy, for Biran, was a refuge from the politics of his day, it was thanks to Cousin that spiritualism became a form of politics.

Jan Goldstein has brought renewed attention to "[t]he hegemony of Cousinianism in France, its ability to beat out its competitors and impose its concept of the self on a significant segment of the population," which, she suggests, "rested first and foremost on Cousin's capture of the *lycée* curriculum."⁷ Cousin introduced his eclectic spiritualism in the first courses he taught at the École normale supérieure in 1815. But it was on the heels of the 1830 Revolution that Cousin cemented his pedagogical-political power by installing eclectic spiritualism as the nation's official philosophy. Cousin claimed a post in the five-member Royal Council of Public Instruction, which set the parameters of a

⁵ François Azouvi and Dominique Bourel, "Avant Propos," in *De Königsberg à Paris: La réception de Kant en France (1788-1804)* (Paris: J. Vrin, 1991), 10-11.

⁶ See Victor Cousin, "Souvenirs d'Allemagne," *Revue des Deux Mondes* 64 (1866): 594-620.

⁷ Jan Goldstein, *The Post-Revolutionary Self: Politics and Psyche in France, 1750-1850* (Cambridge: Harvard University Press, 2005), 183.

new examination that all students took in order to receive the baccalaureate upon *lycée* graduation. Ever since 1809, when philosophy instruction was formalized under Napoléon, all public school students studied philosophy in the third and final year of *lycée*. It was a feature of French education that philosophy marked the coronation of a student's primary school career. With the 1832 mandate, Cousin introduced psychology into the curriculum. It was positioned as the first subject of the philosophy course, followed by logic, morals, and theodicy. The mandate overthrew the prior organization of the curriculum, which followed the medieval division of logic, metaphysics, and morals. The next year, the *loi Guizot* reorganized primary school instruction. The law facilitated the training of more professors in order to expand the educational system. It did so by creating two separate tracks in primary instruction: an elementary track that taught reading, writing, and arithmetic, as well as courses in morality; and a superior track that offered courses in geometry, physics, natural and human history, and geography. These reforms put the innovations in place that Cousin promoted following his study of German education. Their effect was to secure a rigid structure of social organization. The two tracks served to regulate mobility between the classes, and the superior one in particular filtered out those students deemed unfit to climb the ranks of the bourgeoisie.⁸ The same year, 1833, Cousin served as general supervisor of the *École normale supérieure*. Perched at the top of the educational hierarchy, the *École normale supérieure* advanced more students through the *agrégation* than any other university. From 1833 on, Cousin surveyed the matriculation of the students who would carry forth his eclectic legacy. As Jean-Louis Fabiani documents, the vast majority of subjects covered by the *agrégation* as well as thesis topics chosen by doctoral students were dedicated to the progression of

⁸ Douglas Johnson, *Guizot: Aspects of French History, 1787-1874* (New York: Routledge, 1963), 127-129.

philosophers, from Plato to Leibniz, that Cousin imposed as the antecedents of eclectic spiritualism.⁹ Although Cousin would exercise most of his influence from within the Royal Council, he ascended to the position of Minister of Public Instruction for eight months in 1840. Until Bonapartism returned in 1853, Cousin mobilized his bureaucratic control over the educational system to enforce eclecticism as the official philosophy.

Cousin was not without help in securing his power. The politician François Guizot and philosopher Pierre-Paul Royer-Collard were respected figures in the movement known as the Doctrinaires. Cousin followed the tutelage of Guizot, the eponymous architect of the 1833 law, who was the Minister of Public Instruction from 1832 to 1836 before serving as Prime Minister in 1840. Alongside Guizot, Royer-Collard proved to be a model for the young Cousin. Royer-Collard left his professorship at the Sorbonne in 1815 to serve on the Council of Public Instruction. Guizot and Royer-Collard endorsed the Doctrinaire ideology of constitutional monarchism, which they promoted in their respective transitions between the worlds of education and politics. State authority, in their eyes, functioned best when disseminated via social institutions. “Chief among those institutions,” Goldstein writes, “were the public schools, that, placed under the supervision of the Université, already had one foot in the state. To produce new forms of knowledge and then disseminate them by means of the school system was thus a characteristically Doctrinaire procedure for the modernization of state power.”¹⁰ The method rubbed off on Cousin. Thanks to Guizot’s guidance, the already precocious Cousin swiftly climbed the institutional ranks. He consolidated his authority by

⁹ Jean-Louis Fabiani, *Les philosophes de la république* (Paris: Les éditions de minuit, 1986), 46-49.

¹⁰ Jan Goldstein, *The Post-Revolutionary Self*, 153.

occupying numerous posts under the July Monarchy in the Chamber of Peers, the Institut de France, the Académie française, and Académie des science morales et politiques.

The official spiritualism came to symbolize a conservative force dictated over philosophy professors from on high. As the dissident professor Joseph Ferrari lambasted it in *Les philosophes salariés*, “Mr. Cousin was born in the university; we don’t know him to be a part of any other family, and he carries his condition like a monk.”¹¹ Ferrari was a socialist philosophy professor at the Université de Strasbourg, when he was ejected from his post for having taught a controversial course on Renaissance thought. Soon after, with the formation of the Second Empire, the imperial government suspended Cousin’s control over the organs of his pedagogical-political authority. His position atop the Royal Council of Public Instruction, surveillance of the philosophy program at École normale, and control over the *agrégation* in philosophy were all eliminated. Following Louis-Napoléon’s coup, suspicion was cast over what many state authorities thought to be the anti-Clerical bent of Cousinian psychology. As a result, the philosophy class was abolished in the *lycées* and replaced with a class in logic. Cousin’s political hiatus would endure until 1863 when Victor Duruy was appointed Minister of Public Education. One of his first decrees was to restore the Cousinian philosophy curriculum and re-open the *agrégation* in philosophy.

Although the specter of Cousin continued to weigh on French academia after his death in 1867, eclectic spiritualism did fall from its status as the official philosophy. The rise of the Third Republic set the stage for an alternative spiritualist current, untethered to the historical march of ideas culminating in Cousin. Freed from the edicts of eclectic

¹¹ Joseph Ferrari, *Les philosophes salariés* 1849, ed. Stéphane Douailler and Patrice Vermeren (Paris: Payot, 1983), 88.

spiritualism, French philosophers still committed to their nation's philosophical heritage turned to the recently published works of Biran to uncover what remained, for the better part of Cousin's tenure, an occluded philosophical sub-current. Biran would offer a pliable version of spiritualism firmly grounded in the empiricism of the sciences yet critical of reductive scientism.

Spiritualism Against Sensationalism

The conceptual rift between Biran's and Cousin's spiritualisms took its point of departure from each thinker's critique of the sensationalist doctrine of from the eighteenth century. It was in response to the psychologies of John Locke and especially Étienne Bonnot de Condillac that Biran and subsequently Cousin advanced rival spiritualist psychologies.

In the second book of *An Essay Concerning Human Understanding* (1690), Locke posited the basic empiricist commitment that ideas originate in experience. According to Locke, experience is of two kinds, sensation and reflection. Sensation tells us about things and processes in the external world. Reflection tells us about the operations of our consciousness. Reflection is an internal sense that makes us conscious of our mental processes. Some ideas we get only from sensation (such as extension, shape, and motion), some we get only from reflection (such as memory, judgment, knowledge, faith), and some come from both (such as pleasure, pain, being, power, unity and succession). The *Essay* was monumental for predicating these ideas of a single consciousness. In fact, the English word "consciousness" entered the French vocabulary as "con-science" with

Pierre Coste's 1714 translation of the *Essay*. As Étienne Balibar affirms, "in making consciousness the criterion of the identity of the person, Locke revolutionized the very conception of subjectivity."¹² For Locke, consciousness gives shape to the structure of thought, which he understood to be more than the diverse contents of individual ideas. Consciousness imparts identity to thought, or as Coste transcribed, "*con-science* makes the *same person*."¹³

Étienne Bonnot de Condillac provided France with its own brand of empiricism. Condillac advanced a more radical empiricism, positing sensation alone as the source of ideas in his *Traité des sensations* (1754). This was the doctrine of sensationalism. Whereas Locke posited reflection as a basic faculty of consciousness, Condillac instead presented attention as its basic faculty. The crucial difference was that reflection composes and decomposes what is perceived in sensation. Attention, however, must be built out of the progressive accumulation of sensations. Condillac argued that the entirety of our mental world could be progressively constructed out of sensations drawn from the external world. As a thought experiment, Condillac considered a statue void of any knowledge (a radicalization of Locke's *tabula rasa*) in order to demonstrate that the progressive accumulation of basic sensations could build up higher faculties. The statue's most basic sensation was smell. Olfactory stimuli would furnish a primitive sense of pleasure and pain, but not an idea of an external object to which the smell belongs. Condillac then considered sight, which would provide the statue with a sense of colors. Finally, the sense of touch would furnish the statue with knowledge of distinct objects

¹² John Locke, *Identité et différence. L' invention de la conscience*, ed. Étienne Balibar (Paris: Seuil, 1998), 10.

¹³ John Locke, *Essai philosophique concernant l'entendement humain*, trans. Pierre Coste (Amsterdam: P. Mortier, 1714), 265.

existing in space. Touch would contribute the sensation of solidity, the source of the idea that extended objects exist. The statue would finally use its spatial awareness to attribute scents and colors to external objects existing outside oneself. According to Condillac, consciousness admits degrees: the statue gains a greater consciousness as it accumulates sensations and heightens its power of attention.

Biran and Cousin argued that neither Locke's empiricism nor especially Condillac's sensationalism justified a sufficient concept of the self. Although Locke and Condillac provided an account of ideas' origin, they neglected to explain ideas' coherence in a unified consciousness. Insofar as all sensations as well as ideas are experienced as part of *my* consciousness, then experience must exhibit unity. Otherwise, experiences would float through time without any meaningful connections; and without meaningful connections, there would be no ground to ascertain causal relations between experiences. Biran and Cousin argued that there must be a basis on which to ground the necessarily unified character of consciousness; and moreover, that such a basis cannot be derived from sensations received from the external world, since unity is already a presupposition of all experience. The self, or *moi*, served to impart unity to consciousness. Jan Goldstein identifies this point as Biran's guiding influence on Cousin:

Its main features were the postulation of a self, or *moi*, existing before sensory experience and as the precondition for it; a phenomenological elaboration of the nature of experience and the radical separation of the domain of external or sensory experience, labeled "objective," from a privileged domain of internal experience, or consciousness, labeled "subjective"; and the postulation of consciousness of the *moi* as a so-called *fait primitive*, or originary fact, that grounded the theory at a fixed and stable point.¹⁴

¹⁴ Jan Goldstein, *The Post-Revolutionary Self*, 129-130.

Goldstein, however, neglects the profound difference between Biran and Cousin. Whereas Cousin leaned on a transcendental concept of the self borrowed from his readings of Kant, Biran advanced a corporeal concept of the self drawn from his readings of physiology. Whereas Cousin believed that the self is given, following Goldstein, “before sensory experience and as the precondition for it,” Biran, to the contrary, affirmed that the self does derive from sensory experience, albeit from the distinct sensory experience of motility.

The divergences between Biran’s and Cousin’s respective accounts of the unity of the self further hinged on their readings of Leibniz, Kant’s German predecessor. Biran saw himself as bringing Leibniz’s *La Monadologie* (1714) to bear on psychology by conceiving the self as a force rather than as a substance. According to Leibniz, consciousness entails an act of apperception, meaning that consciousness is always consciousness *of* an object. Consciousness is not itself an object. Biran argued that the self is a principle of motor activity exercised upon an object; but motor activity is not itself a substance. Cousin, however, treated the self as a substance, the lone ground he deemed sturdy enough to secure the identity of personhood. The difficulty with Cousin’s account, as Pierre Leroux charged in his polemic against eclecticism, is that it reified consciousness as an object before knowledge: “only such a hardly solid thinker could...take consciousness or apperception for something isolable from the phenomenon.”¹⁵ Indeed, Cousin’s writings displayed his unflagging penchant for invoking the *moi* as the master concept neglected by his philosophical opponents.

¹⁵ Pierre Leroux, *Réfutation de l’éclecticisme* (Paris: Charles Gosselin, 1841), 129. Leroux was a romantic socialist who sought to challenge Cousin’s philosophy as much as his politics; see Warren Breckman, “Politics in a Symbolic Key: Pierre Leroux, Romantic Socialism, and the Schelling Affair,” *Modern Intellectual History* 2, no. 1 (2005): 61-86.

Biran formulated his account of the unity of the self on the basis of the medical writings of Pierre Jean-George Cabanis and Marie François Xavier Bichat. Both thinkers pioneered an experimental turn in the natural sciences of the early nineteenth century by replacing the anatomical paradigm of describing organs' structures with the physiological paradigm of explaining the function of organs. Their medical revolution followed the political revolution in Paris. Cabanis and Bichat saw their work in physiology as part of a larger project that they called anthropology, or "the science of man," which sought to connect ideology and physiology by adopting Condillac's method of analysis.¹⁶ "Medicine could thus lay claim to the whole of human experience," Elizabeth Williams writes, "and was rendered fundamentally anthropological in nature."¹⁷ Cabanis was especially emphatic. Anthropology would synthesize "the systematic development of [man's] organs with the analogous development of his sentiments and his passions, relations from which it clearly results that physiology, analysis of ideas, and ethics are but the three branches of a single science, which may be justly called *the science of man*."¹⁸ Other prominent physiologists such as Phillipe Pinel and Charles-Louis Dumas contributed to the project. But what singled out Bichat and Cabanis was their adherence to advancing the empiricist tradition. Both accepted the empiricist account of the generation of ideas out of sensations. Yet they believe that this generative process remained obscure so long as it was confined to philosophical reflection. While reading

¹⁶ Keith Baker argues that Condillac was not the sole influence on early French anthropologists. See his study on Condorcet's formidable influence over Bichat and Cabanis in particular: *Condorcet: From Natural Philosophy to Social Mathematics* (Chicago: University of Chicago Press, 1975), 117.

¹⁷ Elizabeth A. Williams, *The Physical and the Moral. Anthropology, Physiology, and Philosophical Medicine in France, 1750-1850* (New York: Cambridge University Press, 1994), 85.

¹⁸ Pierre Jean-George Cabanis, *On the Relations Between the Physical and Moral Aspects of Man* vol. 1, trans. Margaret Duggan Saidi (Baltimore: Johns Hopkins University Press, 1981), 33; originally published as *Rapport du Physique et du Moral de l'Homme* vol. 1 (Paris: Crapelet, 1805),

the lectures of Cabanis and Bichat between 1799 and 1802, Biran inventively appropriated physiology as the key to securing the unity of the self without recourse to transcendental principles.

It was on the basis of their respective critiques of sensationalism, I want to suggest, that later readers understood Biran's thought to be better serviceable than Cousin's to engage developments in the natural and human sciences. If the self was not anterior to, but instead immanent to sensory experiences, as Biran's psychology held, then the autonomy of consciousness could be articulated in dialogue, rather than in confrontation with, those very sciences. In order to appreciate these divergent paths, a closer examination of Biran's and Cousin's respective psychologies is in order.

Biran's Treatise on Habit

The lone significant work that Biran published during his lifetime was *Influence de l'habitude sur la faculté de penser* (1802). It was a treatise that won Biran an essay competition organized by the Institut de France,¹⁹ but its historical significance was far greater: the treaty bridged the philosophical epochs of the eighteenth and nineteenth centuries.²⁰ Biran employed then-contemporary physiological concepts in order to explain the nature of force, causality, and substance, all of which were concepts central to philosophers of the eighteenth century. *Influence de l'habitude* was published anonymously, and Biran's only other works to reach the press were a minor essay on the

¹⁹ Biran originally submitted the treatise in 1799 in response to the topic: "Determine what is the influence of habit on the faculty of thought; or, in other words, show the effects made on our intellectual faculties by the frequent repetition of their very operation."

²⁰ Jean Wahl makes this point in *Tableau de la philosophie française* (Paris: Gallimard, 1962), 69-71.

philosophy of Pierre Laromiguière and another on Leibniz.²¹ “He had the taste for writing and the rather strange habit of beginning over again the same work without end,” Paul Janet surmised, “but he never had the taste for publishing, he feared it.”²²

Biran construed habit as an ontological principle, a foundation of being as much as a condition of freedom. Habit endows humans with the tendencies that impart direction to their lives and a backdrop to their self-modification. Biran’s view contrasted with the negative appraisal of habit, inaugurated by Descartes and extending through Kant, which construed habit as a blind repetition corroding the rational coordination of the will. These thinkers condemned habit as mechanized routine, whereas Biran conceived automaticity as a constitutive and even virtuous disposition of the will. This positive conception of habit was part and parcel of Biran’s picture of consciousness. Thinking, Biran held, is an enduring, and even taxing activity, rather than a punctuated act of the understanding.

Thought, on this picture, is both affective and perceptual, which Biran presented as respectively instinctive and intellectual; and habit effectuates the passage of thought between these dual dimensions: “Among the repeated impressions which gradually weaken, some continue to fade away and even completely vanish, whilst others, in becoming more *indifferent*, not only conserve all their clarity, but often acquire even more distinction.”²³ Biran posited habit as the force that degrades feeling and perfects perception, what he called the double law of habit: “the less we feel, the more we

²¹ Maine de Biran, *Examen des leçons de philosophie de M. Laromiguière* (Paris: Fournier, 1817); “Exposition de la doctrine philosophique de Leibniz” in *Biographie Universelle*, ed. Michaud, T. 23 (Paris: Michaud, 1819).

²² Paul Janet, *Les problèmes du XIXème siècle* (Paris: Michel Lévy Frères, 1872), 284.

²³ Maine de Biran, *Influence de l’habitude sur la faculté de penser*, ed. Pierre Tisserand (Paris: Presses universitaires de France, 1953), 87; originally published as *Influence de l’habitude sur la faculté de penser* (Paris: Henrichs, 1802).

perceive.”²⁴ On the one hand, the double law generates passive habits. The resistance that my body meets in its effort to carry out a task, with repetition, engenders a habit facilitating my body’s smooth execution of the task. The resistance I initially felt has now diminished, and the effort initially demanded subsides. What at first required intellectual coordination now flows instinctively. My newfound habit is passive, as I automatically carry it out. On the other hand, the double law generates active habits. I hear a new language, for example, as a confused mass of sound, unable to understand the meaning of discrete words. I commit myself, straining and struggling, to learn the vocabulary. Habit facilitates the ease with which I not only come to speak the language, but also to understand its meaning. What I at first felt as a cacophony, I now perceive as a system of signs with conceptual content. According to Biran, the ensemble of signs that constitute ideas are all active habits.

In the treatise on habit, Biran intervened in the empiricist tradition by distinguishing two kinds of sensation where Condillac as well as Locke had only conceived of one. Active sensations that the body voluntarily wills, Biran affirmed, are different in kind than the passive sensations that the body receives as impressions from the external world. For Biran, the active sensation of effort corresponds to a motor force that opens an immediate window onto the self. Sensations received passively, no matter how intensely impressed or how frequently repeated, are not sufficient to generate an idea of selfhood. Biran’s analysis of consciousness as a motor activity dependent on the sensation of effort would cleave a newfound basis for spiritualism from the empiricist tradition.

²⁴ Ibid.

Effort, Biran argued, generates an idea of the self. But effort depends on the distinct sense of motor activity entailed in the feeling of resistance: “Effort necessarily carries with it the perception of a relation between the being who moves or who wants to move, and an obstacle opposed to its movement. Without a subject or a will that determines the movement, without a term that resists, there is no effort, and without effort, no consciousness, no perception of any kind.”²⁵ The reason why resistance is so essential to selfhood is because it involves a reflexive awareness of one’s effort. I am aware of applying *my* effort as much as *my own* resistance. “The basic example is not at all the effort exerted in order to raise a weight or to break a stick, that is to say the experience of a conflict between two forces, one internal and the other external,” Henri Gouhier clarifies, “muscular effort gives me the feeling of a force deployed against an organic resistance, without any reference to an external object; their opposition is no way that between subject and object, but between the active and the inert, the one and the multiple.”²⁶ Hence, habit plays a crucial role in generating an idea of the self because habit modulates the resistance that my own body confronts in itself. For Biran, the idea of the self entails two selves: the self that acts and the non-self that resists.

Biran set this dialectic of effort and resistance in opposition to Condillac, who argued that the sense of touch generates the idea of the self by way of contrast to external objects distinct from myself. Not only did Condillac’s argument fail to explain the *unity* of the self, Biran claimed, but it also neglected the reflexive experience that the active experience of touching entails. Sensations merely washed over Condillac’s statue since it only passively received tactile impressions. As Biran affirmed, “In supposing each

²⁵ Ibid., 75.

²⁶ Henri Gouhier, Introduction to *Maine de Biran, Œuvres choisies* (Paris: Aubier-Montaigne, 1942), 31-32.

interior organic apparatus that is necessary to constitute a being such as a physical man, one could examine what he would be with one sense or another, reducing him to odor or taste for example, or even to sound or sight; one would see his reflective perceptibility narrow or widen before even acquiring any idea of a relation to the exterior world.”²⁷ The most that passive sensations can generate, according to Biran, is knowledge of the individual sense organs, but not knowledge of a unified self, which requires self-consciousness, that is, an awareness of myself feeling myself. By contrast, the sensation of resistance felt in the voluntary exercise of effort generates awareness of an “I who moves, or who *wants* to move.” Effort and resistance are for Biran, “two terms of the relation necessary to ground the first simple judgment of personality: *I am*.”²⁸

Biran’s metaphysical distinction between active and passive sensations built upon and surpassed the physiological distinction that Cabanis and Bichat drew between the body’s inner and outer organs. The inner organs include the liver, stomach, lungs, colon, heart, and kidneys, which, by means of their sympathetic coordination, maintain the organism through circulation and digestion. The external organs include the senses, nerves, larynx, and what these thinkers called “voluntary muscles,” all of which furnish the sensory material for perceiving the world. For Cabanis, the division between inner and outer organs corresponds to the organism’s sensory and motor functions. The internal organs belong to instinct and the external organs coordinate intelligence and reasoning. For Bichat, the functions of the two sets of organs correspond to what he respectively called organic life and animal life. By building on the physiological distinction between

²⁷ Maine de Biran, *Influence de l’habitude sur la faculté de penser*, 78.

²⁸ *Ibid.*, 55.

internal and external organs, Biran identified the metaphysical source of the unity of consciousness in distinctly internal sensations.

Cabanis placed particular emphasis on the role that the internal organs play in affecting consciousness. He examined the constitution of these organs under various conditions such as age, sex, temperament, illness, diet, and climate. Cabanis took note, for example, that “in the bad quarters of cities, puberty is not given enough time to appear. It is hurried, and its effects are usually confused with the early habit of licentiousness.”²⁹ Cabanis made his preference clear for the leisurely life of the province. Yet, the contrast was even more marked in the home: “Within pious and strict families, where children’s imaginations are directed toward religious ideas, the amorous melancholy of their puberty often appears to become mingled with ascetic melancholy.”³⁰ Despite his bucolic sentimentality, Cabanis’ observations highlighted the crucial role played by the internal organs as they transform during puberty and develop an adolescent’s consciousness. The consequence Cabanis drew, against Condillac, was that “the moral ideas and determinations do not depend solely on what are called the sensations, that is the distinct impressions received by the sense organs, but that the impressions resulting from the functions of many internal organs contribute to them in a greater or lesser degree, and in certain cases appear to produce them alone.”³¹ Cabanis thus opposed the discrete sensations received from the external world to the holistic sensations involved in the body’s internal development. It is the latter, Cabanis argued, which explain the generation of consciousness.

²⁹ Pierre Jean-George Cabanis, *On the Relations Between the Physical and Moral Aspects of Man*, 94-95.

³⁰ Ibid., 95.

³¹ Ibid., 97.

Bichat put physiology in service of histology, the science he founded to study the tissues of organs. Bichat contended that the tissues of the heart, lungs, and brain in particular express variable vital functions. These are twofold. On the one hand, the internal organs express the functions of organic life, which, as Bichat wrote, “is composed of a continual succession of assimilation and excretion.”³² Evident in vegetables and animals alike, the organic life permits the organism to “live within itself only.”³³ By contrast, the animal life is peculiar to external organs. The animal life regulates the functions of external organs, by which the animal “exists, as it were, *out of itself*: it is the inhabitant of the world, and not, like a vegetable, of the spot which gave it birth.”³⁴ According to this schema, animals lead a double life, with their internal and external organs respectively expressing organic and animal functions. Bichat presented the two lives in inverse ratio. On one side, the external organs such as the eyes, nose, ears, and hands, are all symmetrical, composed of a right and a left half; they successfully transmit sensations to the brain only when they function harmoniously. A lesion to one eye, or a single blocked nostril, for example, affects the totality of the visual or olfactory field. On the other side, the internal organs such as the stomach and liver do not function as pairs, and where they do, such as the kidneys and lungs, they do not depend on each other to produce a unified sensation. Bichat’s schema was parsimonious. It assigned each organ a function in proportion to its role in the totality of the body. The punctual and voluntary use of the external organs generates clear and discrete ideas of the external world. The uninterrupted and involuntary use of the internal organs generates continuous

³² Xavier Bichat, *Physiological Researches Upon Life and Death*, trans. Tobias Watkins (Philadelphia: Smith & Maxwell, 1809), 3, originally published as *Recherches physiologiques sur la vie et la mort* (Paris: Brosson, 1800).

³³ Ibid.

³⁴ Ibid.

and confused ideas of the self. Biran redistributed Bichat's schema by arguing that the voluntary use of the internal organs engenders an immediate and distinct sense of the self.

Both Bichat and Cabanis advanced groundbreaking accounts of the distinctly internal dimension of sensation that anchored Biran's treatise on habit. Biran claim that he arrived at the same insight independent of his readings of both authors.³⁵ Yet, it is clear that Biran's intellectual debt to Bichat and Cabanis runs deeper than the division both drew between the internal and external organs. Each physiologist offered Biran further material that he molded into his conceptual edifice. First, Biran amalgamated their thought to support the claim that effort generates a unified experience of consciousness. Both Bichat and Cabanis posited internal sensations as scantily conscious. The circulatory workings of the internal organs that sustain the organism are, in normal conditions, not stimulating enough to cross the plane of awareness. The reason was that neither Bichat nor Cabanis treated internal sensations as distinctly perceived. In contrast to the distinct sensations that the external organs transmit to the brain as perceptions of discrete objects, the internal organs produce obscure sensations. Yet, both authors believed that these obscure sensations were the most significant category of sensations. According to Bichat, the internal organs are the seat of the passions. Anger, sadness, and joy all affect consciousness; they affect the voluntary muscles, stimulating or sedating their activity, in order to "snatch from the empire of the will, motions which are naturally voluntary."³⁶ Cabanis' views were of a piece. Internal sensations, he claimed, affect the entirety of the organism. These thinkers' physiological research on the internal source of sensations staged a profound revolution in empiricist thought by distinguishing two qualitatively

³⁵ See Henri Gouhier, *Les Conversions de Maine de Biran*, 120.

³⁶ Xavier Bichat, *Physiological Researches Upon Life and Death*, 55.

different kinds of sensations: holistic sensations affecting the totality of the organism and discrete sensations perceived by the external organs. Biran, I am suggesting, mobilized this distinction to advance a revolutionary account of habit. His treatise showed that the activity of motor effort generates a holistic sensation affecting the totality of the organism, and in turn, that this internal sensation imparts unity to consciousness.

Second, Biran borrowed the conceptual crux of habit – its double law – from Bichat in particular, who formulated the double law of habit thus: “The feeling is constantly blunted by it, whereas the judgment on the contrary owes to it its perfection.”³⁷ Habit, Bichat held, regulates the entirety of animal life. He recounted several scenes in which habit works on new experiences, such as going to the opera for the first time. What is at first felt as a “delightful chaos” gives way, with habituation, to the capacity to discern the elements of dance, music, decoration, and narrative.³⁸ Bichat made clear that “the center of those revolutions of pleasure, of pain, and of indifference is not in the organs which receive or transmit the sensation, but in the mind which perceive it.”³⁹ Biran would take the philosophical mantle from Bichat and explain those operations of the mind. Critical to his explanation was a monistic understanding of habit. Habit, Biran argued, does not contribute new content to sensations, but instead discerns the nuances already inhering in sensations. That is to say that consciousness does not act on sensations from without; rather, consciousness is immanent to the body’s capacity for sensation.

Biran’s treatise ultimately set consciousness in relation to the body anew, in opposition to both Cartesian dualism and biological reductionism. Biran reframed the

³⁷ Ibid., 34.

³⁸ Ibid., 39.

³⁹ Ibid., 37.

dualism that Descartes inaugurated between a thinking substance and a material substance by presenting mind and body as divergent tendencies. The double law of habit effectuates the passage from the mental to the bodily, or as Biran presented it, from the intellectual to the instinctive: whereas the novice strains her mental powers to co-ordinate her resistant limbs, the veteran is unaware of her body's automaticity. Biran's treatise also critiqued the reductionism of Cabanis. It has been noted that Biran's first draft reflected Cabanis' view that consciousness is a series of movements.⁴⁰ Cabanis defended a crudely materialist psychology and famously conceived of the brain "as a peculiar organ, specially designed for the production [of ideas], just as the stomach is designed to effect digestion, the liver to filter bile, the parotids and the maxillary and sublingual glands to prepare the salivary juices."⁴¹ The second draft of the treatise, however, presented consciousness as what Biran called a "hyper-organic cause". The resistance that effort confronts, Biran believed, exceeds the muscles' reaction to external-world objects. For the duality between resistance and effort, between the non-self and the self, is a duality internal to motility.

The dualism between effort and resistance anchored Biran's ethics. Habit erodes the resistance that my effort initially meets in order to erect a secondary resistance. It lulls the body into mechanistic activity as much as it eases consciousness into rote thinking. In both cases, mental activity wanes as corporeal habit waxes, replacing the active exertion of effort with passivity: "Its obstinacy is proportional to its blindness."⁴² Mental error has its source, for Biran, in the passive use of the imagination in place of the active use of

⁴⁰ See Pierre Tisserand, "La fécondité des idées philosophiques de Maine de Biran," *Bulletin de la Société française de Philosophie* 24, no. 2-3 (1924): 29.

⁴¹ Pierre Jean-George Cabanis, *On the Relations Between the Physical and Moral Aspects of Man*, 152-3.

⁴² Maine de Biran, *Influence de l'habitude sur la faculté de penser*, 226.

recollection. Rules that at first take much effort to memorize become formulae, which, once thoroughly habituated, lead us to overlook new evidence. All this serves to support Biran's understanding of freedom: freedom consists of the renewed effort to resist old habits. Where judgment becomes mechanical, and automatic memories obscure the subtleties before us, we must undergo a newfound effort to overcome the obstacles that our habits have erected. Biran's ethics set freedom against itself, since habit, the very condition of our freedom, is also its foremost enemy.

The novelty of Biran's foundational principle, that motor activity generates consciousness, should not be underestimated, although it did bear resemblance to other philosophies of the era. The primacy of effort in Biran's thought was certainly of a piece with Johann Fichte's account of consciousness as a form of striving (*Streben*). Fichte published his *System der Sittenlehre* (1798) just four years prior to the appearance of Biran's treatise. Fichte explained the transcendence of freedom from nature, whereby consciousness organizes organic causes around a principle of unity, rendering them higher, intentional causes.

More pertinently, Biran kept in close contact with the philosophical school known as *idéologie*, which advanced French empiricism following Condillac. The *ideologues* aimed to build a science of consciousness out of the study of linguistic signs. Chief among them was Destutt de Tracy, who coined the term *idéologie* to signify the study of ideas, their origins, and their laws, in his *Mémoire sur la faculté de penser* (1876). Following Condillac, Tracy analyzed ideas by decomposing them into their constituent parts, breaking complex ideas into simple ideas. Along with other *idéologues* such as Pierre-George Cabanis, Comte Volney, Dominique Garat, and Pierre Danou, Tracy traced

simple ideas to their source in sensation. His *Éléments d'idéologie* (1801) categorized ideas into four faculties – sensation, memory, judgment, and will. He presented each as a kind of sensation, effectively prioritizing the first faculty over the other three. The priority that Biran placed on motor activity stood in marked contrast to the ideological explanation of consciousness as the manipulation of signs. Nonetheless, they shared strong ties. Tracy dedicated the twelfth chapter of *Éléments* to the “faculty we have of moving ourselves,” an investigation that flirted with Biran’s account of motility. But it was only later in *Traité de la volonté et de ses effets* (1815) that Tracy acknowledged the distinct power of the will. Tracy’s sustained correspondence with Biran on the subject, beginning in 1804, would prove influential to Biran’s work following his treatise on habit.⁴³ From that point onward, Biran claimed his independence from the *ideologues* by conceiving consciousness as a motor activity.

Eclectic Psychology

Cousin self-consciously formulated his account of the unity of the self against Biran. “That admirable observer taught me to tease out in all our knowledge, and even in the simple events of consciousness, the role of voluntary activity, of that activity in which our personality bursts forth.”⁴⁴ But Cousin conceived the will as one aspect of the self, and not as its originating principle. Cousin’s vision of selfhood functioned to hold together what he called “triplicity” of consciousness: sensation, will, and, above all, reason. Together, these component parts paved the high road from psychology to

⁴³ For a study of the Tracy-Biran correspondence, see Henri Gouhier, *Les Conversations de Maine de Biran*, 136-154.

⁴⁴ Victor Cousin, “Préface de la deuxième édition,” *Fragments philosophique*, xxxv.

ontology, as Cousin wrote, “voluntary activity leading to mankind, sensibility to nature, and reason to God.”⁴⁵ On occasion Cousin often appeared Biranian when asserting, “The will alone is the person or the *moi*.”⁴⁶ But against Biran, Cousin claimed that the will is merely a personal capacity, since the feeling of effort involves one’s *own* volition, whereas reason is universal and thus impersonal. Reason, Cousin held, is a faculty all thought makes use of, but which no one claims as his own. Biran’s ultimate shortcoming, Cousin argued, was that his notion of effort failed to ground an idea of the self sufficient to unite the personal will and universal reason.

Despite the authority that he wielded, Cousin wrote little of his own. The first and most well known publication was his *Fragments philosophiques* (1826). His others were compilations of heavily edited notes of his lecture courses from the École normale featuring programmatic statements, or *faute de mieux*, outlining the contours of eclectic spiritualism. The lectures that inaugurated his career at the École normale, however, would not undergo publication until 1853 when, following his ouster under the Second Empire, Cousin retreated from his position atop the Université de Paris in order to systematize his thought in solitude. It took the form of the ambitiously titled, *Du vrai, du beau, du bien* (1854), in which Cousin positioned psychology as the gateway to aesthetics, morals, natural and public law, and finally theodicy.⁴⁷ Although different in their content, each domain partakes in the same overarching reality. Cousin’s conviction that psychology is the privileged means of making contact with the absolute hinged on his unabashed spiritualism, “whose character is to subordinate feeling to the spirit

⁴⁵ Victor Cousin, “Préface à la premier édition,” in *Fragments philosophiques*, 39.

⁴⁶ *Ibid.*, 25.

⁴⁷ Victor Cousin, “Avant-Propos de l’édition de 1853,” *Du vrai, du beau, du bien* 9th ed. (Paris: Didier, 1862), vi.

[esprit], and to aim at raising up and enlarging man by all the means that reason admits.”⁴⁸ Psychology’s aim, Cousin held, is to peer into the depths of consciousness and, aided by the immediate feeling of spirit, or *sens intime*, unveil the absolute principles embracing all of reality.

The clearest window onto Cousin’s system can be found in the curriculum that he designed for the *lycées* as part of the *loi-Guizot* of 1833. *Lycée* philosophy professors were expected to open class with a brief introduction to the objective of philosophy and its distinction from other sciences. The first section was psychology, which was designed to teach students the proper method by which to achieve certainty in reasoning. Over the course of the section, the professor would explain in each lesson the different faculties of consciousness, the very faculties that the introspective method was meant to reveal: attention, external perception, judgment, reason, memory, abstraction, generalization, and the association of ideas. Cousin deemed each to be a power that consciousness exercises. What holds them together is the *moi*, the principle of unity serving as the foundation of psychology. “The self, its identity and its unity” was the final lesson that synthesized the psychology section.

Psychology concluded with a lesson on the self because Cousin believed that the march of Western philosophy culminated in Kant’s transcendental idealism. Specifically, Cousin traced his eclectic history spanning the seventeenth and eighteenth centuries, which progressed along a providential lineage from empiricism, through common sense philosophy, and ultimately to transcendental idealism. Locke, as I have already discussed, set the point of departure. Cousin borrowed a significant part of his criticism of Locke from the Scottish philosopher Thomas Reid. Originally propounded in his *Inquiry into*

⁴⁸ Ibid., vii.

the Human Mind and the Principles of Common Sense (1764), Reid's common sense philosophy, a term borrowed from Cicero's *sensus communis*, analyzed the truths that must be presupposed in order to enter into rational discussion. They are truths immune from skepticism, including the principle that consciousness experiences direct contact with objects in the external world. Against Locke, Cousin took the principle to mean that the ideas and sensations that we are directly aware of do not constitute the limit of human experience. To that end, sensation is not a privileged mode of experience that mediates the external world; but rather, as Cousin interpreted Reid, sensation is simply one mode of conscious experience.⁴⁹

Beyond empiricism and common sense philosophy, it was Kant who Cousin believed "would introduce us into the depths of a problem which has escaped the other schools."⁵⁰ Although Kant marked the culmination of philosophy's historical march, Cousin pressed his ideas in service of a higher spiritualism. Its aim was "to seize the torch bequeathed to us by the eighteenth century, but to carry it into all the parts of the edifice we set about studying."⁵¹ Cousin meant that spiritualism should mend the antinomies that Kant had erected. The interstice between the *Critiques* of theoretical and practical reason, which mapped onto the worlds of science and morals, left open the possibility of faith. Cousin believed that philosophy did not need to take the divisions of Kant's critical system for granted. It was possible to comprehend the rational kernel uniting Christianity. Herein lay the difference as much as the continuity between Kantian idealism and its appropriation in Cousinian spiritualism. As Paul Janet remarked,

⁴⁹ See Edward H. Madden, "Victor Cousin and the Commonsense Tradition," *History of Philosophy Quarterly* 1, no. 1 (1984): 93-109.

⁵⁰ Victor Cousin, *Elements of Psychology*, trans. Caleb S. Henry (New York: Ivison & Phinney, 1862), 406.

⁵¹ Victor Cousin, *Cours de philosophie sur le fondement des idées absolue du vrai, du beau et du bien*, ed. Adolphe Garnier (Paris: Hachette, 1836), 12.

“Metaphysics, for Cousin, could not continue for long as an abstract and logical science. Its eminently enthusiastic spirit would come to life and ignite itself in the face of the absolute.”⁵² Cousin’s ambition was to work with Kantian categories while curtailing their limitations. In practice, this meant seizing hold of psychology as the surest route to ontology, and thereby deriving knowledge of the absolute from the introspection into consciousness.

Kant’s philosophy afforded Cousin not only a philosophical tool, but also, as critics noted, a political weapon. Cousin packaged the publication of Biran’s work in a thinly veiled critique. In the introduction to Biran’s four volumes of Biran’s posthumously published writings, Cousin argued that the sensation of effort fails to furnish the metaphysical basis of reason. “Now, in order to succeed in pulling together all the philosophy of [Biran’s] psychology,” Cousin wrote, “the first condition is for psychology itself to be completed, that it reproduce all the facts of consciousness.”⁵³ For Cousin, the “facts of consciousness” are the pure categories of the understanding (quantity, quality, relation, modality) that, according to Kant, are presupposed by any object in general prior to being experienced. They are pure because the categories cannot be derived from any experience. In opposition to Biran’s motor psychology, Cousin advanced a faculty psychology. By packaging the posthumous publication of Biran’s writings in eclectic wrapping, Cousin managed to blunt the novel import of Biran’s psychology, which broke with the outmoded view of consciousness as an ensemble of distinct faculties.

⁵² Paul Janet, *Victor Cousin et son oeuvre* (Paris: Calmann-Lévy, 1885), 82.

⁵³ Victor Cousin, Introduction to *Œuvres philosophiques de Maine de Biran*, Vol. 4 (Paris: Ladrangue, 1841), xxvii.

Constructing an Alternative Spiritualism: Biran's Belated Reception

The full contours of Biran's motor psychology, in which he developed a more rigorous account of consciousness untethered to the faculty-psychology of the eighteenth century, only became known with the publication of his posthumous volumes. The dissemination of his work was the subject of intense controversy. Omissions were abounding, as Cousin, charged with editing Biran's late writings, guardedly regulated their appearance. Many in fact believed that Cousin intentionally distorted Biran's legacy to safeguard his own eclectic spiritualism. Biran initially designated Joseph Lâiné, president of the Chamber of Deputies under Louis XVIII, as the executor of his estate. Lâiné solicited Cousin to inventory four cartons worth of manuscripts in 1825. Yet it was only in 1834 that the first of Biran's manuscripts was released, *Nouvelles considérations sur les rapports du physique et du moral de l'homme*, followed by *Nouvelles considérations sur le sommeil et les songes* (1837),⁵⁴ and finally a more complete four-volume set, *Œuvres philosophique de Maine de Biran*, would wait until 1841.

Readers hastened to criticize Cousin's summary of Biran's thought as one-sided. Indeed, Cousin, who controlled the release of Biran's writings, ensured that French audiences came to know the thinker within the terms of his own eclecticist interpretation. The three axes of Biranisme, according to Cousin, were, first, that the true activity of consciousness belongs to the will; second, that the will is the *moi*, "the personality and all the personality;" and third, the *moi* is the first cause of all conscious activity: "The

⁵⁴ Published in *Mémoires de l'Académie royale des sciences morales et politique*, 2ème série, T. 1 (1837).

person, the will, and causality are therefore identical.”⁵⁵ Cousin faithfully distilled the ideas contained in Biran’s early work; but Cousin neglected to mention their debt to medical science. Cousin lumped the early Biran together with empiricist thinkers, ignoring his inventive appropriation of physiological ideas.

More importantly, critics alleged that Cousin’s selection of materials was woefully incomplete. Pierre Leroux wrote in his journal, *Le Globe*, urging Cousin to publish Biran’s work in its entirety. Following the release of the four volumes in 1841, Leroux decried Cousin for having “held for twelve years the case of manuscripts that had been entrusted to him, without making them known to the public; for only after two lustrums did he publish some of them, a publication which further paid a great honor to Biran. But isn’t twelve lost years, when the discoveries of a man like Maine de Biran are at stake, just baffling?”⁵⁶ Leroux’s accusation was legible: Cousin deliberately withheld the publication of Biran’s work for fear that it would compromise the edifice of eclectic spiritualism. Suspicion was in the air. As Patrice Vermeren suggests, “Was it not because its publication would have overshadowed [Cousin], reducing his own glory to have shattered the eighteenth century while in addition posing the danger that one could have found in Maine de Biran the germ of another spiritualism, more rigorous and coherent than eclecticism?”⁵⁷ Cousin’s authority made him a visible target for his philosophical opponents. But the idea that Cousin had intentionally distorted Biran’s thought in order to secure his personal prestige stirred a notably incendiary controversy in the otherwise aseptic world of philosophical affairs.

⁵⁵ Victor Cousin, Introduction to *Œuvres philosophiques de Maine de Biran*, x.

⁵⁶ Pierre Leroux, “De la mutilation d’un écrit posthume de M. Jouffroy,” *Revue indépendante* (November 1, 1842), 293.

⁵⁷ Patrice Vermeren, *Victor Cousin: le jeu de la philosophie et de l’état* (Paris: L’Harmattan, 1995), 208.

It was perhaps not beyond Cousin's political guile to purposefully withhold Biran's manuscripts from publication. But Biran's heritage also testifies to practical reasons for their belated release. Cousin took over an incomplete set of manuscripts that Biran had left in Paris. Many others remained in Grateloup-Saint-Grayard, as Biran's subsequent editor, Ernest Naville noted, "having been thrown away indiscriminately as paperwork in a waste bin, they were carried back to a grocer's home by one of his servants."⁵⁸ Cousin spent time raising funds for the cartons' publication, a task more difficult than he initially thought, since the publisher feared that the little-known philosopher's work would not sell.

"The works that Victor Cousin edited," according to one of Biran's late editors, "gave rise to few admirers."⁵⁹ Paul Janet reflected that by their publication in 1841, when Cousin's monopoly over French philosophy was already firmly installed, "it seems that the moment had already passed for the philosophical germ contained in these writings to be able to bear fruit."⁶⁰ Biran's manuscripts underwent publication at a glacial pace for most of the nineteenth century. It was the same work, as Henri Gouhier suggests, that unfurled from Biran's disjointed opus: first penned as *Mémoire sur la décomposition de la pensée*, then reworked as *Essai sur les fondements de la psychologie*, and finally edited as *Nouveaux essais d'anthropologie*.⁶¹ This period of production began immediately following his treatise on habit in 1802 and extended through 1822, when Biran was finally satisfied enough with his work. It marks what scholars categorize as the second

⁵⁸ Ernest Naville, *Notice historique et bibliographique sur les travaux de Maine de Biran* (Paris: Avril, 1851), vii.

⁵⁹ Chanoine Mayjonade, "L'Évolution religieuse de Maine de Biran," *Bulletin de la Société française de Philosophie* 24, no. 2-3 (1924): 65.

⁶⁰ Paul Janet, *Les problèmes du XIXe siècle*, 285.

⁶¹ Henri Gouhier presents this three works as part of the same evolving project, *Les Conversions de Maine de Biran* 6.

period of Biran's oeuvre, which he dedicated to physiological psychology.⁶² Between Biran's two major works, the published treatise on habit and the posthumously published memoirs on psychology, lies the difference, I want to suggest, between a spiritualism preoccupied by an eighteenth-century conception of the will, and a corporeal spiritualism of motility that would become indispensable for late nineteenth century readers.

It was the Swiss François Naville and his son Ernest Naville who took on the task of filling the lacunae of Cousin's editions by publishing Biran's memoirs on psychology. In 1843, when writing his study *La Génie de Maine de Biran*, François Naville received a hefty 35 pounds of manuscripts from Biran's son, Félix de Biran. He had recovered the majority from a waste bin. François Naville gave up his work and dedicated his efforts to publishing the carton. He at last made Biran's writings on psychology available in their near entirety in 1845.⁶³ But the majority of the work was done by Ernest Naville following his father's death in 1846. Saddled with piles of unorganized papers, Naville remarked, "What a task it is to carry a light into such chaos!"⁶⁴ Ernest went on to publish Biran's *Journal intime* in 1857, a collection of memoirs that finally allowed readers to synthesize the stages of Biran's thought. The Naville family's editions were what one editor characterized as a "revelation," correcting what had until then been an obscure rendering of Biran's thought under Cousin's editorial authority.⁶⁵

Scientific spiritualists of the latter nineteenth century were some of the first readers privy to Biran's scientific writings generally, and his forceful critique of faculty

⁶² The period constitutes the writings of Biran's youth, including the treatise on habit. The third period constitutes his religious writings, which exceed the scope of this chapter.

⁶³ François Naville, ed., "Fragments inédits de Maine de Biran," *Bibliothèque universelle de Genève* T. LVI (1845); T. LVII (1845); T. LVIII (1845).

⁶⁴ Ernest Naville, "Histoire des manuscrits inédits de Maine de Biran," *Maine de Biran, sa vie et ses pensées* (Paris: Cherbuliez, 1857), xxix.

⁶⁵ Chanoine Mayjonade, "L'Évolution religieuse de Maine de Biran," 66.

psychology in particular. It was Alexis Bertrand, a friend of the late Maine de Biran, who would make his work especially relevant to scientific spiritualists. Bertrand published Biran's diverse presentations at his Medical Society of Bergerac in *Science et psychologie. Nouvelle œuvres inédites de Maine de Biran* (1887). Indeed, it was only in the 1880's that Biran's thought became available in its entirety. The circuitous route that Biran's manuscripts followed left his corporeal spiritualism, grounded in a sustained dialogue with physiology and psychology, to blossom ever so slowly, waiting some sixty years after he originally put pen to paper for later generations to see the scientific import of his thought.

The Medical Society of Bergerac

French readers learned about the scientific import of Biran's account of motor activity with the late publication of the writings he wrote as an organizer of the Medical Society of Bergerac. Biran founded the society in 1806. That year, the Empire appointed Biran as a regional deputy of the southwestern French town, a position he held until his death in 1824. The society gathered forty members in total, including doctors, surgeons, pharmacists, and public health officials, who discussed the natural sciences as well as issues of public policy.⁶⁶ Their first goal was to produce a medical topography of the region. The society surveyed not only the health of citizens, but also the diseases afflicting agriculture, potable water sources, and veterinary health – both domesticated animals in homes and farms, in addition to those living in mountain forests. Following

⁶⁶ See Pierre Lemay, *Maine de Biran et la Société Médicale de Bergerac* (Paris: Vigot, 1936); Paul Marx, "Maine de Biran (1766-1824), fondateur de la Société Médicale de Bergerac," *Histoire des sciences médicales* 32, no. 4 (1998): 285-388;

their survey, the society regularly informed the mayors and pastors of the predominantly Protestant region about the benefits of vaccination – a notable announcement in an age before the discovery of bacteria. Diseases were still believed to result from atmospheric causes. Yet, vaccinations against smallpox had been recently discovered just ten years prior, and Biran insisted on their distribution, especially to children and the elderly. Biran's public health campaign was admirable, yet he failed to muster enough support for the society's continuation. After four years and a total of ten meetings, the society closed its doors in 1810.

At the Medical Society, one of the most noteworthy subjects debated was the work of Franz Joseph Gall, the eccentric Viennese physiologist best known as the creator of cranioscopy – what came to be known as phrenology. Cranioscopy claimed to localize the mental faculties in their respective areas of the brain. These areas could be discerned along the crevices and bumps of the skull; and Gall developed a method to palpate and measure the skull in accord with a classification of its different shapes. Each mental faculty had its proper place, so injuring brain tissue near the back of the head, for example, would disable a person's "philoprogenitiveness" (from the Greek for "love of offspring"), the seat of amorous feelings. Biran was keenly interested yet skeptical of Gall's ambition to break consciousness into distinct faculties. In France, his work was first made available thanks to the reports of his disciple, Johann Casper Spurzheim, who later vulgarized the doctrine into the racial science that he called "phrenology." Before the Institut de France on March 14, 1808, Spurzheim and Gall presented a paper titled "Recherches sur le système nerveux en général, et sur celui du cerveau en particulier." Biran, however, would relay Gall's findings to the Medical Society by way of the

anatomist George Cuvier's review of craniology published later that year.⁶⁷ Indeed, Bergerac was a hotbed for discussions of the burgeoning science of brain localization well before craniology burst into the popular imagination with a biting satire of the method in the *Edinburgh Review* in 1815.⁶⁸

Before the Medical Society of Bergerac on November 13, 1808, Biran presented a critique of Gall's work.⁶⁹ Biran was not interested in the practice of skull palpation that had captivated popular audiences. He instead directed his critique at what he took to be the more neglected, yet metaphysically intriguing, aspect of Gall's work: his anatomy, and most importantly, the understanding of consciousness that it presupposed. Gall proposed an anatomy of the nervous system that identified the brain stem as the hub of nervous activity, running down through the spinal cord and up through the brain cortices. This account upended the widely held view that the brain is the center of the nervous system. Gall instead saw it as an appendix to the nervous system. Biran argued that the brain is one of many sites where pairs of nerves formed bulges, indicating prolonged nervous activity. Since these bulges protrude the most on the brain, it is easiest to analyze them through the curvature of the skull. Although the brain played a derivative role in Gall's nervous anatomy, the brain was the region that most clearly exposed the hidden neural bulbs. Gall's complete classification of the different kinds of bulbs claimed to reveal the pathways of nervous activity, indicating the locale of a person's sensations and ideas, but more importantly, his or her temperament and character.

⁶⁷ See George Cuvier, *Rapport sur un mémoire de MM. Gall et Spurzheim, relatif à l'anatomie du cerveau* (Paris: Baudouin, 1808).

⁶⁸ John Gordon, "The Doctrines of Gall and Spurzheim," *Edinburgh Review* 25 (1815): 227-268.

⁶⁹ Maine de Biran, "Observations sur les divisions organiques du cerveau considérées comme sièges des différentes facultés intellectuelles et morales," in *Tome V des œuvres de Maine de Biran: Discours à la société médicale de Bergerac*, ed. François Azouvi (Paris: J. Vrin, 1984), 47-81.

Biran seized on what he took to be a contradiction between Gall's nervous anatomy and his cranioscopic method. If the nervous system were in fact decentralized, as Gall's anatomy held, then the brain would only manifest a portion of the neural bulbs, meaning that the skull would not be the privileged point of access onto the mind's faculties. Biran argued that Gall wound himself into a contradiction after overthrowing the accepted anatomy of the nervous system initially presented by Bichat, and his division of humans' organic and animal lives. Only those nerves transmitting animal functions, Bichat held, extend immediately to the brain, whereas the nerves transmitting organic functions only reach the brain after traversing the spinal cord. Where Bichat admitted two kinds of nerves, cerebral and spinal, Gall only admitted one kind. Biran argued that Gall had no reason to believe that the brain could house the mind's faculties if the brain did not lay claim to special nerves destined to reach it. Nervous pathways could just as easily disperse to other regions of the body. The merit of Bichat's anatomy, by contrast, was that it offered a coherent reason why the brain laid claim to the nervous system, specifically those nerves corresponding to animal functions.

Biran drew from Bichat's physiology to critique the faculty psychology that Gall endorsed. Bichat's division between animal and organic life, to recall, explained the distinction between two kinds of perceptions: distinct perceptions received from the external sense organs, and obscure perceptions received from the internal sense organs; the former pertain to intellectual ideas of objects in the external world, whereas the latter pertain to what Bichat called the passions affecting the total disposition of the organism. Biran argued that by treating the brain as the privileged domain of the mind's faculties, Gall had neglected the obscure internal perceptions that Bichat had shown to be

transmitted through nerves not immediately destined for the brain. As a result, Gall fell captive to a picture of consciousness that conflated what Biran called the “affective faculties” and the “intellectual faculties.”⁷⁰ Gall construed the functions of consciousness as discrete and separable, as if they were designed to represent distinct perceptions of the world. It naturally followed, Biran affirmed, that craniology aimed to localize mental faculties along the skull’s fixed bumps, since Gall already endorsed a picture of consciousness amenable to localization. Gall neglected the affective ideas flowing before consciousness continuously and incessantly, which express a class of sensations affecting the entirety of the organism, and specifically its character and temperament. Bichat’s division between organic and animal life ultimately served, for Biran’s purposes, to elucidate a more fundamental distinction between two kinds of ideas: “those which arise exclusively from the internal sense [sens intime], and which apprehend nothing of the outside, and those which, on the contrary, have their reason in exterior observation.”⁷¹

Biran’s critique of craniology provided him with an opportunity to clarify the relation between physiology and consciousness’ multiple dimensions – affective and intellectual. At stake was the problem of translating the dual nervous systems into the duality of consciousness, what Biran called *homo duplex*. “If the affective faculties, like the intellectual faculties, have their seat in the brain,” Biran rhetorically asked of Gall, “then where does this opposition and struggle come from, which we feel in ourselves between two principles of movements and determinations, that power of desire, the true motor force, at times dominant over that of passions, instincts, and appetites that pull in the opposite direction as in the stoic sage, and at other times subjugated by those truly

⁷⁰ Ibid., 76.

⁷¹ Ibid., 74.

unhappy passions that seem to drag us away by a kind of *fatum*?”⁷² In other words, what was most damning about Gall’s cranioscopy was not the nervous anatomy on which it was grounded, nor even the well-known method of skull palpation, but its failure to offer a complete account of consciousness in its dual dimensions.

The work of mid-nineteenth century French alienists confirmed the medical value of Biran’s division between the intellectual and affective dimensions of consciousness.⁷³ “Alienism” was employed to designate the psychology of mental maladies. The alienists Jules Baillarger and Jacques-Joseph Moreau de Tours co-founded the *Annales médico-psychologique* in 1843. In the journal, they reported on cases of mental regression, which they believed to reveal the affective and automatic dimension of consciousness otherwise occluded beneath the voluntary and attentive dimension. Baillarger was known for his studies of mental automatism evident in hallucinations, depression, and especially in what is now called manic-depressive disorder. These delirious states evince what he took to be a psychological automatism, whereby consciousness regresses to an animal state. Similarly, Moreau de Tours dedicated his *Du Hachisch et de l’aliénation mentale* (1845) to his experimentation with the drug, which he believed offered a glimpse into the affective dimension by dampening the motor activity of attentive consciousness. Mid-nineteenth century alienists thought dreams, above all, present the clearest window into this kind of non-attentive, yet nonetheless conscious activity.⁷⁴ These thinkers drew from the Biranian insight that mental abnormalities manifest the resurgence of a complimentary dimension of consciousness marked, above all, by the cessation of

⁷² Ibid., 80.

⁷³ Henri Delacroix, “Maine de Biran et l’école médico-psychologique,” *Bulletin de la Société Française de Philosophie* 24, no. 2-3 (1924): 51-63.

⁷⁴ Exemplar is Alfred Maury, *Le Sommeil et les rêves* (Paris: Didier, 1861).

voluntary activity. This distinction reflected the Biranian division between the active and passive dimensions of consciousness, what he later re-formulated as the intellectual and affective dimensions. The thesis overhauled the thought of the early nineteenth-century alienist Jean-Étienne Dominique Esquirol, who believed that mental abnormalities manifest a failure of the mind's mechanism of attention, and not the positive expression of a complimentary activity.⁷⁵

The division that Biran drew between the intellectual and affective dimensions of consciousness in his medical writings refined and updated his account of motility from the treatise on habit in light of physiological research. In the treatise, Biran had posited a stark opposition between passive and active sensations, privileging the latter as the unique source of consciousness. In clarifying the organic and animal duality in the human nervous system, Biran elucidated the heightened duality internal to conscious activity. He thereby resolved the problem left lingering in his treatise on habit: how to explain the connection between passivity and activity. But the dialogue that Biran staged between Bichat's and Gall's anatomies at Bergerac ultimately could not have the last say, since medical analysis could offer insights into the causes of conscious activity, but it could not explain the meaning that consciousness confers on its activity. "Between the science of organic functions, and that of sensations and *ideas*, I would first observe that the physiological analysis of vital functions has nothing and can have nothing in common, in its object or in its aim, in its technical practice, and in the results that it proposes, with the psychological analysis of ideas and human understanding."⁷⁶ Biran defended a straightforward anti-reductionism; but he did so, it is worth highlighting, by deriving the

⁷⁵ See Esquirol's three-volume *Des maladies mentales considérées sous le rapport médical, hygiénique, et médico-légal* (Paris: Baillière, 1838).

⁷⁶ Maine de Biran, "Observations," 49.

very possibility of reductionism from the dual dimensions of consciousness grounded in intellection and affection, or what he alternatively referred to as imagination and reflection:

This line of demarcation, I say, which separates the two kinds of analyses at stake, is founded on the difference and very opposition between the two faculties that direct them respectively, namely: the imagination, which, representing what is outside of us, follows exclusively in the formation of its pictures from what can be *seen, touched*, and described as such; and reflection, which, concentrating on what is inside us, completely follows the most intimate modes, and does not at all have, outside of consciousness, signs of manifestation, objects or images, which would exist physically. Therefore, there are two analyses or two methods of essentially distinct divisions: the first is *representative* and descriptive; it is that which is appropriate to the anatomical and physiological sciences; the second is purely reflexive, which must be employed exclusively in the science appropriate to ideas and faculties of a thinking subject.⁷⁷

Biran presented the imagination and reflection as two complementary yet opposed dimensions internal to consciousness. The imagination, because it is tailored to the external world, engenders illusions when employed to represent the internal world of consciousness. One of these illusions belongs to faculty psychology, which divides consciousness into an ensemble of discrete faculties as if they were objects occupying space in the external world. Cranioscopy thus depended, Biran argued, on a one-sided misrepresentation abstracted from the reflective dimension of consciousness. What Biran called “reflection” is a dimension that presents ideas as they are experienced reflexively, and not as they are observed in the external world. With this newfound division between imagination and reflection, Biran forged an internal bond between the atomistic and holistic dimensions of experience that he had previously presented as respectively passive and active sensations.

⁷⁷ Ibid., 50.

Nineteenth-century French spiritualism thus emerged out of the rift between a spiritualism of the body and a spiritualism of reason. These divergent spiritualisms were allied to distinct metaphysical methods, grounded in physiology and history respectively. Herein lied the difference, I hope to have shown, between, on the one hand, Biran's corporeal spiritualism, which posited motility as the key to analyzing consciousness' multiple dimensions; and on the other hand, Cousin's eclectic spiritualism, which posited the intellect as the *sine qua non* of consciousness. These divergent paths, as I have argued, followed a history of discontinuous receptions after Biran's thought had remained buried for much of the early nineteenth century. Indeed, the reception of Biran's posthumous work, unearthed as it was from beneath the official philosophy of eclecticism, only came about thanks to the efforts of those whose challenge to Cousin's authority was as strident as their commitment to restoring the roots of the spiritualist legacy. In their revolt against Cousin's segregation of philosophical reflection from scientific inquiry, and what they saw as his narrow intellectualism, a cadre of thinkers who I will examine in the next chapter, Félix Ravaisson, Jules Lachelier, and Émile Boutroux, brought about a Biranian renaissance.

Chapter 2: Nature, Contingency, and Félix Ravaisson's Spiritualist Positivism

The divergent paths of French spiritualism came to the fore in 1867, when the little-known but immensely influential philosopher Félix Ravaisson published his *Rapport sur la philosophie en France au XIXe siècle*. Victor Duruy, the Ministry of Public instruction, commissioned Ravaisson to document the state of philosophy of France in anticipation of the 1869 Universal Exhibition in Paris. Record keeping was in order. Philosophy instruction remained an experimental project in secondary education after having re-opened under the Second Empire. Most importantly, Ravaisson released his report immediately following the death of Cousin. His death came as the eclectic regime's authority over national pedagogy began to dissolve, a fate Ravaisson welcomed: "In these last years, eclecticism, although still in possession of nearly all public education, has lost its credit and influence."¹ The report scanned the past, tracing the march of Western philosophy bequeathed to France, from Plato and Aristotle, through the scholastics of the Middle Ages, the Kantian revolution, Condillac, Ampère, Royer-Collard, and up to the physiology of Claude Bernard. But the roots of French spiritualism, as Ravaisson presented their lineage, split in two directions: the official spiritualism of Cousin, and the subterranean spiritualism of Biran.

Ravaisson delineated this bifurcation within French spiritualism in opposition to the tradition's critics, most notably the positivist Hippolyte Taine, who republished his own report the same year. His *Les Philosophes classiques du XIX^e siècle en France*

¹ Félix Ravaisson, *Recueil de "Rapports" sur les progrès des lettres et des sciences en France, Rapport sur la philosophie en France au XIXe siècle*. (Paris: Imprimerie impériale, Hachette et Cie, 1867), 32.

identified the central fissure in French philosophy to be between positivism and spiritualism.² For Ravaisson, to the contrary, there was a three-fold fissure between positivism and two currents of spiritualism. It was a point on which Ravaisson's student, Jules Lachelier, insisted after reading the report:

Aren't there in reality, since 1815, two philosophies: on the one hand, that of Mr. Cousin and his school, on the other, that of Maine de Biran... Isn't it the silent struggle between these two philosophies, and the gradual triumph of the latter over the former, which you did not sufficiently indicate in your report?³

Ravaisson's report served as a bellwether in France for its prognostication of the shape that philosophy would take in the post-Cousinian era. The future of philosophy, Ravaisson foretold, would bring about what he called a "spiritualist realism or positivism":

The signs are in place; we can foresee a philosophical epoch soon to come whose general character will be the predominance of what might be called a *spiritualist realism or positivism*, having for its motivating principle the awareness that consciousness has of itself, a self understood to be an existence from which all other forms of existence derive and depend, and which is nothing other than its own activity.⁴

Ravaisson's objective was to enhance Biran's spiritualism on a positive and naturalist basis. The contents of conscious experience, Ravaisson believed, ought to be studied as facts no less real than the facts of material reality. Studying the immediate (one

² Hippolyte Taine, *Les Philosophes classiques du XIXe siècle*, 3rd. ed. (Paris: Hachette, 1868), vii.

³ Jules Lachelier, letter to Félix Ravaisson, 15 Aug. 1868, MS 4119, *Papiers divers d'Émile Boutroux*, Manuscrits de la Bibliothèque de l'Institut de France, Paris.

⁴ Félix Ravaisson, *Rapport*, 258, my emphasis. The significance of Ravaisson's *Rapport*, and these lines in particular, have been documented among French philosophers. Henri Gouhier acknowledges "the most apparent manifestation of this new state of spiritualism was the work of Ravaisson himself; but the theses of Lachelier in 1871, of Émile Boutroux in 1874, of Bergson in 1889, and of Maurice Blondel in 1893, would go on to show how accurately and far off Ravaisson saw," *Œuvres choisies de Maine de Biran* (Paris: Aubier, 1942), 22. More recently, François Azouvi recognizes the *Rapport* as having originated "spiritualist positivism" in *La gloire de Bergson. Essai sur le magistère philosophique* (Paris: Gallimard, 2007), 27.

might anachronistically say “phenomenological”) data of experience would overcome the persistent metaphysical dualisms that haunted the history of philosophy: “In the infinite, fact and cause, essence and existence, are one, containing each other as equivalent yet abstract expressions of a single positive idea in which reason and experience merge.”⁵ And this positive idea, Ravaissan clarified, “is that of a fully active, and thus fully spiritual nature, its existence complete and absolute; a nature from which it follows that thought, will, and love are one and the same thing, a flame, as it were, without material support, and thriving on itself.”⁶ Spiritualist positivism would, in opposition to Cousinian spiritualism, trace the activity of consciousness from the activity of nature, and in so doing elevate a new science of consciousness complementing the science of nature.

Ravaissan’s *Rapport* resonated throughout France well after its publication. “Generations of students,” Bergson reflected, “have learned [these pages] by heart.”⁷ Bergson himself was one of those students who adopted spiritualist positivism when he began to write his *Essai* in 1882.⁸ But the true value of Ravaissan’s prognostication, Bergson believed, lay in the trajectory it lent to philosophers’ engagements with science: “That the serious study of the phenomena of life must lead positive science to widen its framework, and go beyond the pure mechanism in which it has been enclosed for the last three centuries.”⁹

Spiritualist positivism, Ravaissan believed, would renew the French spiritualist heritage. Despite Cousin’s close regulation of Biran’s reception throughout the first half

⁵ Félix Ravaissan, *Rapport*, 260.

⁶ Ibid., 261.

⁷ Henri Bergson, “The Life and Work of Ravaissan,” in *The Creative Mind*, trans.. Mabelle L. Andison (Mineola, NY: Dover, 2007), 204, originally published as “La vie et les œuvres de M. Félix Ravaissan-Mollien,” *Comptes rendus de l’Académie des Sciences morales et politiques* (Paris: Firmin-Didot et Cie, 1904).

⁸ Isaac Benrubi, *Souvenirs sur Henri Bergson* (Paris: Delachaux et Niestlé, 1942), 52-53.

⁹ Henri Bergson, “The Life and Work of Ravaissan,” 204.

of the nineteenth century, Ravaisson sought to restore Biran's thought as the wellspring of a subterranean spiritualist current. In 1840, Ravaisson published a forceful blow to the Cousinian regime, arguing that the eclectic philosopher had sullied Biran's legacy. "Mr. Cousin declares that he adopts Maine de Biran's doctrine of the identity of the *moi*, or of the identity of the personality and the will," Ravaisson argued, "But at the same time, it seems to us that he has denatured and annulled it on account of the restrictions that he imposes."¹⁰ It was up to a new generation of spiritualist thinkers to rejuvenate Biran's thought. "It was Ravaisson who taught us," Jules Lachelier wrote to his colleague, Paul Janet, "to conceive being, not by the *objective* forms of substances or of phenomena, but by the *subjective* form of spiritual action; and furthermore, this action ultimately lies in thought or will [*volonté*]." Although the problem of "spiritual action" was straightforward, "perhaps even the only one which...lends unity to our philosophical movement," the path by which the problem traversed the nineteenth century was not. "I don't need to remind you of the article in the *Revue des deux mondes* [1840] in which Ravaisson connected his writing to the philosophy of Maine de Biran. There you have," Lachelier concluded, "our point of departure."¹¹

According to Ravaisson, Cousin failed to appreciate that Biran's concept of effort was not simply a personal feeling constitutive of consciousness, but also an impersonal force inhering in nature. "Effort supposes... an anterior tendency which, by its auto-development, provokes resistance; it is the original activity, prior to effort, which, reflected by resistance, comes to possess itself by itself in a voluntary action."¹²

¹⁰ Félix Ravaisson, "Fragments de philosophie de M. Hamilton," *Revue des Deux Mondes* 24 (1840): 422.

¹¹ Jules Lachelier, letter to Paul Janet, 8 Dec. 1887, MS 4687, *Opuscules et correspondance de Jules Lachelier*, Institut de France.

¹² Félix Ravaisson, "Fragments de philosophie de M. Hamilton," 425.

Ravaisson read Biran through a vitalist lens, arguing that habit marks the threshold between consciousness and nature. The double law of habit, according to Biran, emerges from a single vital force. As Mark Sinclair remarks, “Instead of Biran's distinction of passive and active impressions... Ravaisson apprehends... a graduated continuum from the lowest levels of activity in more passive, sensory experiences to its highest levels in the clearest consciousness and voluntary apperception.”¹³ Ravaisson advanced his reading of Biran's treatise on habit in *De l'habitude* (1838), a guiding book in the development of French spiritualism that illuminated Biran's account of motility as a naturalist alternative to eclectic spiritualism.

This chapter traces Ravaisson's formative role in nineteenth-century French spiritualism, joining the Biranian past to the post-Cousinian future. In the wake of his *Rapport*, a wave of thinkers advanced spiritualist positivism in order to expand the scope of science and conceptualize the meaning of positive facts anew. Their work, I am arguing, set the stage for the ascent of scientific spiritualism. In particular, Jules Lachelier and Émile Boutroux, two students of Ravaisson, enlarged Biran's psychology by setting it in an energetic and creative nature. Specifically, Lachelier and Boutroux posited contingency as the mediating principle connecting consciousness and nature. The contingency inherent in nature, these thinkers argued, explains the possibility of novelty and ultimately the genesis of human freedom. Their elaboration of the indeterminate creativity inhering in the determinate laws of nature constituted a formidable challenge to Cousin's eclectic regime and a novel rapprochement between metaphysics and science.

¹³ Mark Sinclair, “Ravaisson and the Force of Habit,” *Journal of the History of Philosophy* 49, No. 1 (2011): 75.

Félix Ravaisson's *De l'habitude*

Jean Gaspard Félix Ravaisson-Mollien was born in 1813 in Namur, a small town in modern-day Belgium. As a young student, Ravaisson received the sponsorship of Cousin after having written a winning essay on Aristotle's *Metaphysics* in a competition hosted by the Académie des Sciences Morales et Politiques in 1834. Following Cousin's recommendation, Ravaisson spent time in Munich attending Friedrich Shelling's philosophy lectures. Upon returning to Paris in 1837, Ravaisson submitted his thesis, *De l'habitude*, to the Sorbonne, and pursued a career outside of academia. Although he was never a professor, Ravaisson nonetheless exercised a commanding influence over the matriculation of French philosophy students, first as an Inspector of Libraries, then as an Inspector General of Higher Education. Moreover, he retained a steady position on the jury of the *agrégation* in philosophy, which meant that he oversaw the advancement of philosophy students to the rank of professor. From 1870, he was even a curator of classical antiques at the Louvre. The fact that a philosopher as brilliant as Ravaisson spent his career on the sideline of the universities has led some to speculate that Cousin barred him from becoming a professor.¹⁴ In fact, Ravaisson became the secretary of the Ministry of Public Instruction under Achille de Salvandy, an outspoken opponent of Cousin.

Ravaisson argued in *De l'habitude* that habit forges a bond between the will and nature. Habit is what Ravaisson called “a *natured* nature, the product and successive

¹⁴ See Patrice Vermeren, *Victor Cousin: le jeu de la philosophie et de l'état* (Paris: L'Harmattan, 1995), 217.

revelation of *naturing* nature.”¹⁵ Ravaissou remained committed to the Biranian principle that consciousness is, at bottom, dependent on the will. But whereas Biran’s treatise on habit was concerned with the effects of habit on consciousness, Ravaissou probed the metaphysical impulse that animates habit, not only in humans, but in the entire organic realm. As Bergson summarized Ravaissou’s sweeping thesis, “The visible universe is presented to us as the external aspect of a reality which, seen from within and grasped in itself, would appear to us as a gratuitous gift, as a great act of liberality and love.”¹⁶ Ravaissou propelled his thesis by pursuing the theological and aesthetic implications of habit on the one hand, and the French medical tradition of vitalism on the other.

Ravaissou organized *De l’habitude* into two halves: the first traced the ascent of habit’s animating power from brute matter through vegetable, animal, and ultimately human life; the second half descended, as he described, “from the clearest of regions of consciousness [as] habit carries with it light from those regions into the depths and dark night of nature.”¹⁷ The ascent follows the progressive degrees of habitual activity found in nature. The freer the organism, the greater the force by which habit imparts its tendencies toward action. Vegetables develop habits more freely than brute matter, and animals more freely than vegetables. Even bamboo shoots, Ravaissou noted, habitually mold to the pole around which they grow; but in animals, and especially in humans, the power of spontaneity reaches its apex. “Spontaneity,” for Ravaissou, signified the interval between the actions an organism carries out by its own effort and that organism’s passive reactions to the environment. In brute matter, where action and reaction are equivalent,

¹⁵ Félix Ravaissou, *Of Habit*, trans. Mark Sinclair (New York: Continuum, 2008), 59, originally published as *De l’habitude* (Paris: Fournier, 1838).

¹⁶ Henri Bergson, “The Life and Work of Ravaissou,” 204.

¹⁷ Félix Ravaissou, *Of Habit*, 59.

this interval is inexistent; but in human consciousness, this interval is pushed to its limit, since humans' free exercise of their will surpasses the energy imbibed via nutrition. It is an interval constituting what Ravaisson called a being's "internal potentiality," which he construed as the condition of possibility, following Biran, for the double law of habit: "The change that has come to [an organism] from the outside becomes more and more foreign to it; the change that it has brought upon itself becomes more and more proper to it. Receptivity diminishes and spontaneity increases."¹⁸ As a being acquires habits, nature penetrates its tendencies and guides its spontaneous activity. Habit, as it were, sutures the interval between activity and passivity.

The second half of *De l'habitude* traced the descent from habit to nature.

Ravaisson's aim was to reframe the distinction between the body and consciousness, or better, between nature and the will, not as a static division, but instead as "a dividing line that is always moving, and which advances by an imperceptible progress from one extremity to the other."¹⁹ Drawing on Biran, Ravaisson argued that consciousness emerges from the immediate feeling of effort. And where habit diminishes the effort required to execute actions, consciousness recedes into mechanistic regularity. As one commentator writes, "ideas are no longer representative, it is the idea in action, the actualization of the ideal in this confusion of the end and of movement that is its tendency."²⁰ Habit, in other words, does not simply bridge the division between intention and action, but generates the intentional horizon along which consciousness and nature put the body into action. "Habit is thus, so to speak, the infinitesimal *differential*, or, the

¹⁸ Ibid., 31.

¹⁹ Ibid., 59.

²⁰ Claire Marin, "Ravaisson et Bergson: La Science du Vivant," in *Annales bergsoniennes III: Bergson et la science*, ed. Frédéric Worms (Paris: Presses universitaires de France, 2007), 387.

dynamic *flexion* from Will to nature.”²¹ Ravaisson’s decent from the heights of consciousness to the depths of nature served to show that habit traverses an imperceptible continuity between the two poles.

The poles of consciousness and nature equally circumscribed the domain of freedom, which Ravaisson conceived as the transition between activity and passivity, or what he called “action” and “passion” (or passivity). For Ravaisson, these are the twin dimensions of habit, and it was his goal to present habit as imparting both a metaphysical and aesthetic dimension to freedom. He argued that true freedom depends on the proper cultivation of habit such that one exerts just enough effort (conscious coordination) so as not to overwhelm the resistance encountered in mechanical repetition (force of nature). In perhaps one of the most eloquent passages of his book, Ravaisson characterized this delicate balance action and passion:

[A]s resistance fades, there is no longer anything to reflect the principle of action back onto itself; nothing calls it back to itself. Its will is lost in the excess of its freedom. The subject experiencing pure passion is completely within himself, and by this very fact cannot yet distinguish and know himself. In pure action, he is completely outside of himself, and no longer knows himself. Personality perishes to the same degree in extreme subjectivity and in extreme objectivity, by passion in the one case and by action in the other. It is in the intermediate region of touch, within this mysterious middle ground of effort, that there is to be found, with reflection, the clearest and most assured consciousness of personality.²²

Freedom, balanced between what Ravaisson called “mechanical fatality” and “reflective freedom,”²³ amounts to “the law of grace.”²⁴ The aesthetic meaning of the concept is evinced, for example, by a ballet dancer, whose gestures express her seemingly effortless

²¹ Félix Ravaisson, *Of Habit*, 59.

²² *Ibid.*, 45.

²³ *Ibid.*, 55.

²⁴ *Ibid.*, 57.

levitation.²⁵ Hence, grace manifests as “the law of limbs.”²⁶ But Ravaisson equally conceived grace in theological terms: “Nature is prevenient [divine] grace. It is God within us, God hidden solely by being so far within as in this intimate source of ourselves, to whose depths we do not descend.”²⁷ Paradoxically, it is on the visible body, and not in the depths of the soul, where grace manifests its theological splendor. Habit, according to Ravaisson, inscribes freedom on the flesh.

In radicalizing Biran’s treatise, Ravaisson drew on a number of sources from the French vitalist tradition, Xavier Bichat chief among them. Vitalism explains the distinction between life and matter on account of a vital force animating organisms. Against biological mechanism, which explains vital functions such as respiration and digestion on account of the machine-like relations between an organism’s organs, vitalism affirms the existence of an immaterial principle that coordinates the inner harmony of the organism.²⁸ Bichat, to recall, identified this principle in organic tissues, which actively resist the decaying influence of matter. Ravaisson’s references were extensive, ranging from the seventeenth-century animist Jan Baptist von Helmont to the eighteenth-century physiologist Paul Joseph Barthez. What they shared was a commitment to the naturalist distinction between the variability of living organisms and the mechanical fatalism of inorganic matter.

²⁵ For an inventive and sustained reading of the aesthetic import of grace in Ravaisson’s *De l’habitude*, see Michael Fried, *Courbet’s Realism* (Chicago: University of Chicago Press, 1992), 182-187; *Flaubert’s “Gueuloir”*: *On Madame Bovary and Salammbô* (New Haven: Yale University Press, 2012).

²⁶ Félix Ravaisson, *Of Habit*, 57.

²⁷ *Ibid.*, 71.

²⁸ The enormous debate between vitalism and mechanism was central to the development of the nineteenth-century physiology. See John Theodore Merz, “On the Vitalistic View of Nature,” in *A History of Scientific Thought in the Nineteenth Century*, Vol. 2 1904 (Gloucester, MA: Peter Smith, 1976), 369-464; André Pichot, *Histoire de la notion de vie* (Paris: Gallimard, 1993).

Habit functions as a “hyper-organic cause,” Ravaisson argued, thanks to the vital principle inhering in nature.²⁹ Ravaisson saw himself as filling in the lacuna of Biran’s treatise, which remained silent about the cause of habit. Habit effectuates motor dispositions in organisms that exceed not only the mechanistic laws of physics and chemistry, but also the organic laws of biology. The causal laws peculiar to these sciences, as Ravaisson understood them, determine the relations between natural phenomena that are external to each other. Habit, however, guides the desires and needs internal to the organism. These internal activities, or inclinations of the will, depend on the indetermination inhering in the vital principle interpenetrating the otherwise determinate laws of nature. Nature thus contributes a distinct force to habit, which is irreducible to natural causes. Yet, as Jean Cazeneuve suggests, *De l’habitude* went beyond classical vitalism, in that Ravaisson did not situate vital forces against other domains of nature.³⁰ Ravaisson thus overcame the modesty of the vitalists he cited, who posited the vital force as one element within nature, as if life occupied islands amidst a sea of physical matter. Rather, Ravaisson treated the totality of nature as the manifestation of a single vital principle that progressively enlarges its scope across the hierarchy of vegetal, animal, and human life.

De l’habitude stood out as singular among the theses written under Cousin’s watch.³¹ Ravaisson did not trace a hagiography of the great thinkers leading to Cousin’s eclectic spiritualism, as was the case for most doctoral students of the period. Ravaisson instead radicalized Biran’s account of conscious activity by illuminating its dynamic

²⁹ Ibid., 37.

³⁰ Jean Cazeneuve, *La philosophie médicale de Ravaisson* (Paris: Presses universitaires de France, 1958), 80.

³¹ See “Chronique littéraire de Charles Labitte,” *Revue des Deux Mondes* T. 20 (1839): 523-529.

naturalist foundation. In Ravaisson's hands, Biran's thought offered a philosophical resource for spiritualist thinkers committed to the autonomy of consciousness, yet captivated by its continuity with nature.

Jules Lachelier Between Aesthetics and Nature

Jules Lachelier was born in 1832 in Fontainebleau near the forest where he would later retreat from the Parisian academic scene to hike with Ravaisson. Lachelier entered the École normale supérieure as a student in 1861, and although Ravaisson was not a professor there, his influence loomed over the institution. Ravaisson's position as regular member of the jury for the *agrégation* in philosophy afforded him the power to steer the examination's content, and thus mold the philosophical itinerary students followed in preparation. But following the suppression of philosophy instruction under the Second Empire – the field was transformed into rhetoric with the education reforms of 1853 – Lachelier had to wait a decade before he could sit the *agrégation*. In 1863, he finished first in the newly opened class of philosophy *agrégés*, a diverse group ranging from recent university graduates to elder autodidacts anticipating the opportunity to launch their deferred philosophical careers.³² Lachelier's success granted him an immediate teaching post at the École normale, where he shaped a generation of students who came of age in the post-Cousinian philosophical climate.

As a doctoral student, Lachelier began by writing a thesis on Maine de Biran. "I think I agree with everyone in considering him as one of the strongest supports of

³² "Université de Paris: Agrégés de 1863," 61 AJ 47, Archives nationales, Paris.

spiritualism,” Lachelier wrote to Ravaisson.³³ The problem that Lachelier tackled turned on the principle of causality in Biran’s thought, the key, he believed, to justifying the explanatory principles of the natural sciences. If motor effort generated an immediate apprehension of causation, as Biran stipulated, then on what basis could the personal nature of the will ground the universal nature of force? “From there, it is difficult to abstract the absolute and necessary notion of substance from a relative and contingent fact of individual existence. There you have the vague character of a notion meant to suit both consciousness and exterior bodies.”³⁴ Lachelier completed twenty-nine pages of his thesis before abandoning the project. He instead studied Kant to uncover the bases of scientific causality. In fact, Lachelier gained a reputation as a vanguard of Kantianism at the École normale, where he self-consciously “*Kanticized* all year long.”³⁵ He was known for meeting students in his office, where a copy of Kant’s First *Critique* rested on his desk, always open to the page stating that the “I think” accompanies all our perceptions.³⁶

Lachelier’s commitment to Kant was thoroughly idiosyncratic. Lachelier argued in his magnum opus, *Du fondement de l’induction* (1871), that the laws of mechanism are not sufficient to exhaustively explain the natural world. Our concept of nature also presupposes the unifying activity of consciousness, specifically the Kantian understanding of consciousness as apperception. But Lachelier also went well beyond Kant. True to Ravaisson’s understanding of the continuity between consciousness and

³³ Jules Lachelier, letter to Félix Ravaisson, 5 Dec. 1859, MS 4687, Opusculs et correspondance de Jules Lachelier, Institut de France.

³⁴ Ibid.

³⁵ Jules Lachelier, letter to Félix Ravaisson, 15 Aug. 1868 in Ibid.

³⁶ Célestin Bouglé, *Les Maîtres de la philosophie universitaire en France* (Librarie Maloine, Paris, 1938), 5.

nature, Lachelier contended, “The true philosophy of nature is a *spiritualist realism*, in the eyes of which every being is a force, and every force a thought which tends to a more and more complete consciousness of itself.”³⁷ *Du fondement* sought to surpass the limits of mechanistic science in demonstrating the freedom inhering in the natural world.

The specific problem that *Du fondement* addressed was the use of induction in the natural sciences. As a logical operation, induction facilitates the passage from the particular to the universal. At stake for Lachelier was the operation of induction in our knowledge of nature: how it is that science grounds necessary laws on the basis of contingent facts? The problem, Lachelier contended, hinges on the causal principles put to work when observing natural processes, since the natural sciences posit causal relations in order to predict the occurrence of a future event from prior events. According to Lachelier, the laws of nature depend on two kinds of causes: efficient causes and final causes. Efficient causes hold between a series of events, whereby the same effects follow when the same conditions arise – a principle that Lachelier identified with the universal laws of mechanics. Efficient causes explain, for example, the momentum transferred between objects in motion. Final causes, however, hold between a whole and its parts, such as in organisms, where the function of individual organs are tailored to their role in a biological system – what Lachelier, following the physiologist Claude Bernard, called the “directive idea” [*idée directrice*]. It is the final cause of the circulatory system, for example, to transport nutrients. Although the natural sciences make use of final causes, the very concept of a final cause, Lachelier argued, depends for its condition of possibility on the free activity of consciousness.

³⁷ Jules Lachelier, *Du fondement de l'induction* (Paris: Librairie philosophique de Ladrangue, 1871), 102, my emphasis.

By positing the foundation of both final and efficient causes in the free activity of consciousness, Lachelier countered the claims of British associationism and Cousinian spiritualism. The associationist school posited efficient causality as the prototype of induction, exemplified in the repetition of similar effects out of similar conditions. Where repetitions hold between natural phenomena, consciousness forges an association between cause and effect. On the associationist account, the natural sciences uncover probabilistic, rather than necessary, relations, which for Lachelier left open the possibility of skepticism. Just because certain effects followed certain causes in the past does not ensure the same will effect will follow in the future. Efficient causality alone, as Lachelier argued, fails to secure a satisfying foundation for the organization manifest in nature. The Cousinian school, on the other hand, emphasized final causality, which depends on the concept, or what Cousin (in reference to Kant) called the “intellectual intuition” of beings. That is, the concept of an organism determines the complementary organization of its constitution parts. Since the principle of organization is not immediately evident in an organism’s anatomy, the natural sciences rely upon an intellectual intuition to determine how the organism is meant to develop. But for Lachelier, the Cousinian notion of final cause, confined to an exclusively intellectual operation, remained vague. More importantly, both associationism and Cousinian spiritualism severed the continuity between consciousness and nature: associationism by reducing knowledge to what is senses in nature, and Cousinian spiritualism by positing rational concepts of nature’s unity *sui generis*. “Empiricism vainly endeavors to set a principle on the solid, yet narrow ground of phenomena; the opposite doctrine [Cousinianism], in order to give this principle a wider base, builds in a void and only

manages to state a need of consciousness while claiming to satisfy it.”³⁸ A sturdy foundation of induction instead depends, as Lachelier claimed, on a spiritualist reading of Kant’s transcendental principles.

The transcendental unity of apperception provided Lachelier with the key, first, to explaining both efficient and final causes, and second, to preserving the connection between consciousness and the natural world. True to Kant, Lachelier proceeded by deducing the foundation of induction from the requirements of science. “The most elevated of our knowledge is neither, on this hypothesis, a sensation nor an intellectual intuition, but a reflection by which thought immediately seizes its own nature and the link it supports with phenomena: it is from this link,” Lachelier argued, “that we can deduce the laws that consciousness imposes on them.”³⁹ The unity of apperception, on Lachelier’s reading, confers unity on natural phenomena, precisely because conscious apperception instantiates its unity, following Kant, in the act by which it imparts a systematic structure to nature. But systematicity is not simply a construction of consciousness; it is also evident in natural phenomena themselves, since their “necessary determination is without a doubt something distinct from us, for it imposes itself on us and resists all the vagaries of our imagination.”⁴⁰ But sequential relations are not the only form of relations inhering in nature; there is also the spontaneity of life. Without final causes, biologists would be unable to explain the variations observed in each new generation of a species, as much as the complex relations among an organism’s biological systems.

³⁸ Ibid., 35.

³⁹ Ibid., 38.

⁴⁰ Ibid., 51.

Lachelier's idiosyncratic reading of Kant, formulated in opposition to associationism and Cousinianism, demonstrated that final causes do not rigidly determine natural processes. Finality, that is to say, is not tantamount to ironclad teleology. Rather, Lachelier appropriated finality to formulate an account of spiritualist positivism that explained the harmony inhering in nature. Final causality amounts to "a flexible and contingent law in each of its applications: it requires a kind of harmony in the ensemble of phenomena, but it guarantees neither that this harmony will always be composed of the same elements, nor even that it won't be upset by any disorder."⁴¹ Final causes allow for reciprocal variation, evident in biological processes such as reproduction and retardation, evolution and devolution. In other words, final causes, according to Lachelier, explain the possibility of contingency, and more importantly, the contingency on which efficient causes ultimately depend. "[T]he realm of final causes, by penetrating the realm of efficient causes without destroying it, exchanges everywhere force for inertia, life for death, freedom for fatality."⁴² The laws of physics, for example, depend on the efficient causes that hold between the points traversed by an object in movement; but the object's motion depends on the final causes that impart it with a tendency. This latter order of causality accords with the intensive force propelling the object, an order otherwise hidden beneath its extensive measurement. It is what Lachelier called the aesthetic order of nature: "Nature thus possesses two existences founded on two laws that thought imposes on phenomena: an abstract existence, identical to the science for which it is an object, and a concrete existence, identical to what one could call the aesthetic function of thought,

⁴¹ Ibid., 73.

⁴² Ibid., 56.

which rests on the contingent law of final causes.”⁴³ The aesthetic order of nature finds expression in the harmony and freedom with which final causes endow natural processes. But the aesthetic order equally explains the foundation of induction, of both the necessary laws of efficient causes and the contingency opened by final causes. Lachelier’s account of induction thus sought to expand the natural sciences beyond the narrow reach of mechanistic principles, and thereby demonstrate that it is not universal necessity, “but rather universal contingency that is the true definition of existence, the spirit of nature and last word of thought.”⁴⁴ Lachelier’s reconciliation between the realms of mechanism and aesthetics deepened the bond that Ravaisson had initially forged between nature and consciousness. Ravaisson’s project, as Lachelier affirmed, animated the effort to naturalize spiritualism against the Cousinian tradition:

There is a kind of spiritualism, which, at face value, consists of simply placing spirit [*l’esprit*] above nature without establishing the relation between one and the other. But there is a deeper and fuller spiritualism, which consists of searching within spirit for the explanation of nature itself, on the evidence of the unconscious thought that works within nature and becomes conscious within us, and that only works in order to bring about an organism through which it passes from... an unconscious form to a conscious form. This second spiritualism, it seems to me, was that of Ravaisson.⁴⁵

Lachelier’s spiritualist critique of the limitations of mechanism spurred many to criticize the philosopher for advocating the “bankruptcy of science.” “At the École normal they teach the relativity of science and the supremacy of morals,” one critic lambasted, “you find there, since Lachelier, all the young generations of students learning

⁴³ Ibid, 81.

⁴⁴ Ibid., 86.

⁴⁵ Jules Lachelier, “Spiritualism,” in *Vocabulaire technique et critique de la philosophie*, ed. André Lalande (Paris: Félix Alcan, 1926), 792-793.

it while beginning their studies.”⁴⁶ Yet Lachelier did not oppose science, as I hope to have shown; he instead critiqued a narrow conception of science, all the while defending mechanistic principles as the starting point of natural scientific inquiry. “Determinism is certainly not the truest system, and I even take it as absolutely false the moment it becomes exclusive, but on the other hand,” Lachelier hastened to clarify in a letter to Ravaisson, “it is the clearest, or rather, the lone clarity for our mortal eyes.”⁴⁷

Du fondement endured as the chief work by which Lachelier was known until his death in 1913. The young Bergson even read it as a young *lycée* student.⁴⁸ Lachelier insisted that *Du fondement*, despite its mass appeal, was only a modest contribution to French spiritualism. When the philosopher Gabriel Séailles offered to write a philosophical biography on Lachelier, he promptly declined. “I had, I believe, some philosophical ideas,” Lachelier wrote, “hardly original, nearly all drawn from Descartes, Leibnitz, and Plato as well as Aristotle, who were all, no doubt, more valuable; but these ideas were never strongly enough connected, nor even largely enough developed, to make them into a system, or even simply a doctrine.”⁴⁹ Lachelier’s claim that he never had a system was not without merit. But his engagement with the natural sciences, and insistence that freedom surpasses the limits of the mechanistic world, lent a durable advancement to spiritualist concept of contingency in post-Cousinian France.

⁴⁶ Alphonse Darlu, “Réflexions d’un philosophe sur les questions du jour: Science, morale et religion,” *Revue de métaphysique et de morale* 3 (1895): 249; also see H. W. Paul, “The Debate Over the Bankruptcy of Science,” *French Historical Studies* 5 (1968): 299-337.

⁴⁷ Jules Lachelier, letter to Félix Ravaisson, 21 Dec. 1867, MS 4687, *Opuscules et correspondance de Jules Lachelier*, Institut de France.

⁴⁸ See Jean La Harpe, “Souvenirs personnels d’un entretien avec Bergson,” in *Henri Bergson, essais et témoignages inédits*, eds. Albert Béguin and Pierre Thévenaz (Neuchâtel: Baconnière, 1943), 358.

⁴⁹ Jules Lachelier, letter to Gabriel Séailles, 15 Oct. 1913 MS 4687, *Opuscules et correspondance de Jules Lachelier*, Institut de France.

Nature and Contingency in the Thought of Émile Boutroux

Émile Boutroux was born to a Catholic family in Montrouge, France on July 28, 1845. Catholicism, and specifically his commitment to man's freedom amidst the natural world, motivated Boutroux's philosophical formation. Boutroux began at the École normale in 1865 and studied under the tutelage of Lachelier. Boutroux's philosophical orientation became clear at an early age. He sought to reconcile the spiritualist philosophy in which he was immersed with the natural sciences. "As soon as I was at the École normale," Boutroux reflected, "I wondered why philosophy had been confined to the section of letters, while all the great thinkers...had participated in the sciences." Boutroux believed that if philosophy "is a matter of truth, and not only of sentiment, then it could not consider the acquisitions of the positive sciences as its strangers."⁵⁰

Reconciling metaphysical and experimental methods preoccupied the young Boutroux, especially in his rich correspondence with Lachelier. "Take the example of water boiling. How does it boil?" Boutroux queried his professor. "The bubbles of vapor form and leave the vase that is in contact with the fire; the bubbles burst for a certain time before arriving at the surface of the liquid." Experimental methods, Boutroux insisted, seek to uncover more than just how water boils. The problem at stake was why the water boils. "Science, Claude Bernard says, consists of predicting the phenomena of nature and mastering them. In other words, after having responded to the question *how*, you must respond to the question *why*? It is when we know the phenomena by their determinate

⁵⁰ Émile Boutroux, "Notes autobiographique, 1909-1912," MS 4122.5, Cahiers d'étudiant et papiers divers d'Émile Boutroux, Institut de France.

cause that we can predict and master them.”⁵¹ It is up to the sciences, Boutroux affirmed, to ascertain the causes of natural processes; but Lachelier encouraged his student to seek further: “the question *why* might be susceptible to several meanings, and these meanings could be the object of metaphysics.”⁵² Indeed, metaphysics would not serve Boutroux simply to elucidate the foundations of the sciences, but to intervene in their working concepts.

After Boutroux passed the *agrégation* in philosophy in 1868, Lachelier suggested that “you will be a dangerous professor, so shouldn’t we send you on a mission.”⁵³ With Lachelier’s encouragement, Boutroux left to study under Eduard Zeller, the neo-Kantian professor at the University of Heidelberg. In fact, Boutroux was part of a wave of French intellectuals in the late nineteenth century who studied idealist philosophy across the Rhine.⁵⁴ The timing, however, could not have been worse. The outbreak of the Franco-Prussian War severed Boutroux from his intellectual and familial roots. At home, Lachelier served in the National Guard. Although he saw little combat from what he described as his “sedentary position,” Lachelier, skeptical of the Republican cause, developed what he described as “a sad idea of Parisians’ political intelligence.”⁵⁵ Abroad, the experience of war hardened Boutroux. He returned to the wreckage of Paris in 1870, the city humiliated in the wake of the nation’s defeat and broken by the catastrophe of the Commune. Boutroux managed to find intellectual refuge by teaching in provincial *lycées*, first in Caen, then in Montpellier, and finally in Nancy. Although his

⁵¹ Émile Boutroux, letter to Jules Lachelier, 1868, MS 4122.7, Ibid.

⁵² Jules Lachelier, letter to Émile Boutroux, 1868., Ibid.

⁵³ Jules Lachelier, letter to Émile Boutroux, 6 Sept. 1868, MS 4687, *Opuscules et correspondance de Jules Lachelier*, Institut de France.

⁵⁴ See Michel Espagne, *En deçà du Rhin. L’Allemagne des philosophes français au XIXe siècle* (Paris: Éditions du Cerf, 2004).

⁵⁵ Jules Lachelier, letter to Émile Boutroux 2 Apr. 1871, MS 4687, *Opuscules et correspondance de Jules Lachelier*, Institut de France.

travels in Germany contributed to his defense of German culture for much of his life, the First World War prompted Boutroux to publically discern the sources of German belligerence in the idealist philosophy he had studied. “What is the German meaning of civilization?” Boutroux inveighed in a 1915 pamphlet, “It is a virile education aimed at force and employing force.”⁵⁶

As a *lycée* philosophy instructor, Boutroux dedicated his time outside the classroom to drafting his doctoral thesis, *De la contingence des lois de la nature* (1874). Motivated by Lachelier’s concept of contingency, Boutroux demonstrated that freedom is not simply an exception to the mechanistic worldview, but immanent to the causal order of nature. Boutroux addressed *De la contingence* to natural scientists whose ambition it was to determine the necessary laws governing natural phenomena. A law of necessity holds where the same conditions generate the same effects. The paradigmatic example Boutroux had in mind was the law of the conservation of energy, which holds that the total energy of an isolated system remains constant over time. Various formulated in the mid-nineteenth century by the physicists Robert Mayer, James Joule, and Hermann von Helmholtz, the law of the conservation of energy subsumed seemingly singular or arbitrary exchanges of energy under laws of necessity. Boutroux sought to demonstrate that the law of conservation is not exhaustive, and furthermore, that contingency is not simply an exception to the law of conservation, but a constitutive dimension: “Thus every fact” Boutroux wrote “depends not only on the principle of conservation, but also, and in the first instance, on a principle of creation.”⁵⁷ *De la contingence* formulated the principles of novelty complementing the stability of nature. Boutroux did so by

⁵⁶ See appendix of *L’Allemagne barbare* (Paris: Walter et Cie, 1915), 322.

⁵⁷ Émile Boutroux, *The Contingency of the Laws of Nature*, trans. Fred Rothwell (Chicago: Open Court, 1911), 160, originally published as *De la contingence des lois de la nature* (Paris: Germer Baillière, 1874).

comparing the postulates of science and the laws of reality from, as it were, two directions. From the direction of the intellect, the concept of causal necessity fails to completely capture the complexity of natural phenomena. From the direction of nature, creativity informs natural processes, from the distribution of energy to the emergence of new life forms. Boutroux thus demonstrated the very necessity of contingency.

He did so by building upon Lachelier's investigation of causality, and by further showing that the causal principles employed in the natural sciences must necessarily incorporate contingency. "How can we imagine that the cause, or immediate condition," Boutroux asked, "really contains all that is needed to explain the effect?"⁵⁸ If a cause did contain all that is needed to explain an effect, then an identical relationship would hold between the two. In that case, causality would "never contain that wherein the effect is distinct from itself, that appearance of a new element which is the indispensable condition of a relation of causality."⁵⁹ Contingency must, therefore, be a necessary dimension of causality, Boutroux concluded, in order to ensure that there is heterogeneity between a condition and its effect, such that effects introduce novelty in excess of their causes. The two directions of Boutroux's argument showed that, by fact and by right, natural processes are composed of effects that exceed their causes. From the direction of nature, effects in excess of their cause are empirically observable: "The seed that falls from the beak of a bird on to a snow-clad mountain may occasion an avalanche which will submerge the valleys below."⁶⁰ From the direction of the intellect, the concept of causality entails contingency. If a condition could exhaustively explain what it conditions, then the two would be identical, precluding any genuine distinction between

⁵⁸ Ibid.,30.

⁵⁹ Ibid.

⁶⁰ Ibid., 69-70.

cause and effect. Therefore, according to Boutroux, it is both factually evident that there are effects in nature which surpass the explanatory power of their cause (*quid facti*), and that the notion of causality must account for the novelty by which effects exceed their cause (*quid juris*).

The causal models of the natural sciences were not wrong, Boutroux argued, so much as limited. His demonstration showed that the law of the conservation of energy, in particular, suppresses the contingency inhering in nature by making use of a concept of causality designed to reign in the heterogeneity between causes and effects. Energy remains constant where purely quantitative relations of motion are abstracted from the qualitative transformations in natural processes, such as when water transforms into vapor – a process only made intelligible, from the standpoint of the law of conservation, in the terms of the amount of energy dissipated. “The law of the conservation of force presupposes a change it does not explain,” Boutroux contended, “which it would even make unintelligible were it regarded as possessing undivided sway over primordial modes of matter.”⁶¹ In this sense, the law of the conservation of energy reflects an abstract dimension of nature, isolated from a wider dimension contingency.

This was not to argue for the skeptical conclusion that scientific laws are simply human conventions imposed on nature, although *De la contingence* lent itself to this reading, especially in its claim that “Laws are the channel along which rushes the stream of facts: these latter have hollowed it out, although they follow its track.”⁶² Rather, Boutroux saw himself as intervening in the working concepts of the natural sciences. The principle of contingency, he argued, is not condemned to disorder and confusion, but is

⁶¹ Ibid., 66.

⁶² Ibid., 45.

fully intelligible, and moreover, ought to be incorporated into the sciences. Whereas the law of the conservation of energy exemplifies what Boutroux called the “static sciences,” a complementary, “dynamic” science would employ a historical method that traces the contingent transformations of natural processes. For Boutroux, examining the history of natural processes entailed meticulous experimentation on singular circumstances, in opposition to the deductive application of general laws. The dynamic sciences would unveil the very contingency giving shape to natural processes: “[I]f it is legitimate to set up dynamic sciences alongside of and above the static sciences; if objective science actually consists of these higher sciences, then the doctrine of contingency is conformable to the conditions of science.”⁶³

Science, for Boutroux, was not a monolithic enterprise. He conceived contingency as the organizing principle of the separate sciences. Each domain of nature manifests a heightened degree of contingency, from inorganic matter to organic creatures, from animal life to human being, and from sensibility to intelligence in consciousness. Physics, chemistry, biology, psychology, and finally philosophy: these were the sciences that Boutroux arranged in a hierarchy, whereby each higher level introduces greater contingency, surpassing the explanatory principles of the lower levels. Biology, for example, makes use of physical principles, but it cannot be reduced to the laws of physics. Boutroux directly opposed the claims of positivists such as Hippolyte Taine and Herbert Spencer who sought to uncover the universal principles on which all the sciences depend. Laws capable of comprising nature as a totality would only hold if nature itself were composed of a self-identical substance. “The universe,” Boutroux argued, “is not made up of elements equal to one another, susceptible of being transformed into one

⁶³ Ibid., 165.

another, like algebraical quantities. It is made up of forms bound together by gradations, *i.e.* additions, that are altogether imperceptible.”⁶⁴ The higher sciences leap beyond the lower sciences in a manner analogous to natural processes that exceed their conditions.

In the conclusion of *De la contingence*, Boutroux directed the implications of contingency squarely against the Kantian division between the sensible realm of nature and the suprasensible realm of freedom. In opposition to what he called the “doctrine of reconciliation,” which rescues the possibility of human freedom by excluding it from the mechanistic world of phenomena, the doctrine of contingency “does more than throw open to freedom apart from the world, a field that is infinite, though void of objects which it can contact. It shatters the postulate which makes inconceivable the intervention of freedom in the field of phenomena, the maxim which states that nothing is ever lost and nothing created.”⁶⁵ Contingency manifests the interpenetration of the sensible and the supersensible in nature. Human freedom accentuates the spontaneity inhering in nature, and scientific laws gain their authority because they are part of nature, albeit the most abstract part. Thus contingency, in Boutroux’s words, “lends itself to the conception of a freedom coming down from suprasensible regions to mingle with phenomena and direct them along unforeseen paths.”⁶⁶

The appearance of *De la contingence* in 1874 marked the philosophical and historical threshold of scientific spiritualism. Philosophically, the principle of contingency that Boutroux articulated served a new wave of thinkers intent to elevate

⁶⁴ Ibid., 158-159.

⁶⁵ Ibid., 171.

⁶⁶ Ibid., 172.

the study of consciousness in a newfound dialogue with the science of nature.

Historically, Boutroux himself belonged to the first generation of thinkers to come of age in the aftermath of Cousin's eclectic regime, and to plant its roots in the alternative spiritualist current that Biran had inaugurated.

Boutroux extended the intellectual arc of nineteenth-century French spiritualism – from motility to contingency – by building upon the work of his predecessors, Lachelier and Ravaisson, both in giving shape to spiritualist positivism, and in undermining the philosophical authority of intellectualism. “In order to content our logical understanding, we let go of the spiritual proper, the real being: this lies, beyond its determinations, in the power to determine, in the creative faculty, in energy. This idea,” Boutroux affirmed, “dear to Ravaisson... was one that Lachelier made into his own conviction.”⁶⁷ By incorporating the free activity of nature into consciousness, Boutroux struck at the “logical understanding” – the intellectualist picture of consciousness undergirding the neo-Kantian division between science and freedom. “From the moment that laws or properties have reality only in consciousness [*l'esprit*],” as Boutroux characterized Kantian idealism in an unpublished essay, “what exists beyond consciousness would only be an existence, devoid of all species and manner of being; but such an existence is indistinguishable from nothing.”⁶⁸ Contingency, constitutive of nature's creativity and the laws found therein, refuses to be confined, Boutroux claimed, to the phenomenal dimension of mechanistic causality.

De la contingence reflected an even great debt to Ravaisson. Not only did Boutroux dedicate his thesis to the philosopher, but he also closely studied *De l'habitude*

⁶⁷ Émile Boutroux, “Jules Lachelier,” *Revue de métaphysique et de morale* 28, no. 1 (1921): 6.

⁶⁸ Émile Boutroux, “Rapport de la pensée et des choses dans l'idéalisme,” 4120.2, Cours suivis et travaux d'étudiant d'Émile Boutroux, Institut de France.

while preparing the manuscript. Boutroux transcribed Ravaisson's book as a student at the École normale, and his notes reveal the import of the author's ideas. In particular, Boutroux emphatically highlighted the double law of habit at the core of Ravaisson's thought: "The continuity or repetition of the passion weakens it: the continuity or repetition of the action exalts and strengthens it."⁶⁹ The double law, originally formulated by Biran, served Ravaisson's method of tracing the conditions of human freedom from the animating energy of nature. That animating energy, in Boutroux's thesis, took on the form of contingency. Boutroux's lone marginal note to himself in the transcription reveals what he took to be the significance of the Ravaissonian concept of habit: "what precisely could explain the difference between habit and the will?"⁷⁰ The note suggests that the problem of willing, and its continuity with nature, preoccupied the young Boutroux, who clung to the spiritualist understanding of consciousness as a motor activity. *De la contingence* ardently heeded Ravaisson's call in his 1867 *Rapport* to advance a new spiritualist positivism, a project equally developed by Lachelier to bring both science into the orbit of French spiritualism, and reciprocally, the domain of spirit into the practice of science.

⁶⁹ Émile Boutroux, "Transcription of *De l'habitude*," 15, MS 4122.1, Analyses d'auteurs divers, Institut de France.

⁷⁰ Ibid., 20.

Part II **From Contingency to Pragmatism** **The Consolidation of Scientific Spiritualism**

Scientific spiritualism emerged in France amidst the realignment of the natural and human sciences. In the final quarter of the nineteenth century, psychology, which had previously endured as a subfield of philosophy, became an independent experimental discipline. A new wave of empirically minded researchers culled methods from the physiological and quantitative sciences in order to wrest the study of consciousness from the *sciences humaines* and transform it into a *science dur*. Philosophy lost its privileged claim to psychology as the discipline underwent a bifurcation, split between metaphysical and experimental fields. In France, many experimental psychologists, on the one hand, saw themselves as liberating the study of consciousness from the obscure and exclusively historical bent of eclectic spiritualism. On the other hand, spiritualist philosophers, especially those who came of age under the yoke of Victor Cousin, rebuked experimental psychology as a determinist enterprise that reduced the complexities of consciousness to mere biological functions. Scientific spiritualists sought not simply to reconcile these divergent approaches, but to go beyond them. By studying physiological and quantitative research, scientific spiritualists showed that experimental psychology yielded new metaphysical problems prompting a radical re-conception of the place and role of consciousness in the world.

The emergence of experimental psychology in the late nineteenth century has been widely historicized as a break with metaphysical psychology.¹ And in France, by way of contrast with Britain and Germany, experimental psychological was late to establish an institutional foothold because of the entrenchment of spiritualist philosophy.² Recent historiographies, however, have debunked the patricidal narrative according to which modern scientific methods were cleaved from metaphysical methods. Dorothy Ross documents the constructive imbrication of experimental psychology and metaphysics in the late nineteenth century;³ her approach is one that Jan Goldstein's corpus has also brilliantly advanced.⁴ Similarly, John L. Brooks III and Edwin Reed have exposed the persistence of metaphysical presuppositions in French experimental psychology.⁵ But whether experimental psychology shed its metaphysical baggage, as the old story goes, or held on to it, as recent historiography argues, little research has investigated the path forged by thinkers who renewed metaphysics from within experimental psychology. This history, until now neglected, belongs to scientific spiritualism.

¹ The story of psychology's liberation from philosophy found its clearest expression in Maurice Reuchlin, *Histoire de la psychologie* (Paris: Presses universitaires de France, 1957); also see Daniel N. Robinson, *An Intellectual History of Psychology* (New York: Macmillan, 1981).

² Serge Nicolas claims that spiritualist thinkers, and especially Bergson, delayed the reception of experimental psychology in France, "Introducing Psychology as an Academic Discipline in France: Théodule Ribot and the Collège de France (1881-1901)," *Journal of the History of the Behavioral Sciences* 37, no. 2 (2001): 143-164; *Les Facultés de l'âme: Une histoire des systèmes* (Paris: L'Harmattan, 2005).

³ See Dorothy Ross, ed. *Modernist impulses in the human sciences, 1870-1930* (Baltimore: Johns Hopkins University Press, 1994).

⁴ Jan Goldstein, *Console and Classify: The French Psychiatric Profession in the Nineteenth Century* (New York: Cambridge University Press, 1987); "The advent of psychological modernism in France: An alternate Narrative" in *Modernist impulse in the human sciences*, 190-209.

⁵ John L. Brooks III, *The Eclectic Legacy: Academic Philosophy and the Human Sciences in Nineteenth-century France* (Newark, Delaware: University of Delaware Press, 1998); Edward S. Reed, *From Soul to Mind: The Emergence of Psychology from Erasmus Darwin to William James* (New Haven: Yale University Press, 1997).

My argument in this section is that scientific spiritualism emerged out of engagements with two particular advancements in experimental psychology: psychophysics and psychopathology. It was through a sustained dialogue with researchers in these fields that thinkers such as Henri Bergson, Émile Boutroux, Victor Egger, Alfred Fouillée, Jean-Marie Guyau, Pierre Janet, and Jules Tannery carried out a scientific revolution within spiritualism. This dialogue, to be sure, was not exclusively scientific. Scientific spiritualists drew from the history of French spiritualism. These thinkers brought the principles of motility and contingency to bear on their engagements with experimental psychology, and in so doing, generated a new, distinctly pragmatist account of conscious activity.

At a historical level, this dialogue transpired in the *Revue philosophique de la France et de l'étranger*, the first French journal dedicated to the burgeoning experimental psychology. The journal functioned as a reading community in which scientific spiritualists converged. By pairing articles in metaphysical and experimental psychology side by side, the *Revue philosophique* laid the conditions for a rapprochement between science and spiritualism. It also reflected the widening transnational reach of new inquiry in the human sciences, as contributors to the journal came from America, Britain, and Germany. Thus in opening French spiritualism onto an expanding, intercultural domain of intellectual debate around experimental psychology, the *Revue philosophique* also occasioned a distinctly *scientific* movement in French spiritualism.

At a philosophical level, the pages of the *Revue philosophique* served as a whetstone on which scientific spiritualists sharpened their rupture from the old spiritualists of the Cousinian heritage. The terms of this rupture coalesced around a

pivotal transformation in the concept of conscious activity: from contingency to pragmatism. This transformation lent stakes to the shared problem around which scientific spiritualists united, first, by elevating the principle of contingency on the basis of developments of experimental psychology; and second, by conceptualizing consciousness anew as an action-oriented activity. From contingency to pragmatism signifies the intellectual trajectory scientific spiritualists followed in their dialogue with psychophysics and psychopathology.

These fields captivated French audiences thanks to the young psychologist Théodule Ribot, whose institutional and editorial efforts catalyzed experimental psychology as an independent discipline. Ribot conducted few experiments of his own; his work was more synthetic than original. He founded the *Revue philosophique* in 1876 in order to inaugurate a science of consciousness that streamlined trends from outside France. Ribot steered the flood of British and German developments in psychology that were inundating Paris in the final decades of the nineteenth century. First in *La Psychologie anglaise contemporaine* (1870) and then in *La Psychologie allemande contemporaine* (1879), Ribot disseminated research from British neurologists and reports from the first experimental psychology laboratory in Leipzig (which Wilhelm Wundt officially founded in 1879). Ribot's corpus throws into stark relief just how belated the French were to transform psychology into an experimental science. Yet that is also what makes the French case so intriguing. The late emergence of experimental psychology as an independent discipline in France is attributable, I am suggesting, to the rich entanglement between spiritualist and experimental methods.

The *Revue philosophique* served as the chief channel of research, news, translations, and above all, criticism of experimental methods in France. The myriad articles and reviews that Ribot published therein, as well as his acumen for soliciting the contributions of psychologists, philosophers, historians, mathematicians, and literary scholars, laid the conditions for scientific spiritualists to publish and debate alongside experimental psychologists.⁶ In the inaugural issue, Ribot vigorously rejected what he took to be the hegemony of spiritualism, declaring, “Between natural psychology and metaphysics, there must be a choice.”⁷ Yet, Ribot also presented his *Revue philosophique* as a “complete and exact tableau of current philosophical movements, without excluding any school.”⁸ In 1876 readers surely considered experimental psychology as one philosophical movement among others. Ribot’s ultimate aim was to free experimental psychology from that generalization. He did so by tailoring his criticism of spiritualism to Cousin’s eclectic school. Under Cousin, as I explored in the first section, secondary and university education instilled the history of philosophy as the *raison d’être* of philosophical instruction in France from 1830 to 1867. During this period, psychological research was limited to what Ribot described as “the work of a solitary thinker who, in place of original work, nearly always ends up in useless repetitions or sterility.”⁹ While Ribot used his journal to pry psychology from the eclecticist regime and install the emergent science in the laboratory, scientific spiritualists appropriated experimental research from the pages of the *Revue philosophique* in order to revivify French spiritualism.

⁶ Bergson published his first philosophical article, a brief book review, in Ribot’s *Revue*, “Kant by William Wallace,” *Revue philosophique* T. 16 (1883): 438-439.

⁷ Théodule Ribot, “Introduction,” *Revue philosophique* T. 1 (1876): 3.

⁸ Ibid.

⁹ Ibid.

Psychophysics and psychopathology predominated the content of the *Revue philosophique* from its inception in 1876 to the close of the twentieth century.

Unsurprisingly, these were the developments that Bergson tackled in first two books. Psychophysics, which I will explore in this chapter, preoccupied Bergson's first book, *L'Essai sur les données immédiates de la conscience* (1889). Bergson invoked the principle of contingency to critique the results that Ribot had gathered from Wilhelm Wundt's experiments in his Leipzig laboratory as well as from Gustav's Fechner's algorithms to measure the strength of perceived sensations on the basis of externally observable excitations. Ribot, for his part, believed that psychophysics could offer a mathematical basis for an experimental psychology firmly grounded in physiology.

Psychopathology, and in particular the psychopathology of memory loss, to which I dedicate chapter four, figured prominently in *Matière et mémoire* (1896). Bergson penned his second book, I will argue, to challenge psychopathologists, Ribot chief among them, who claimed to reduce memories to the brain's linguistic centers and thereby localize conscious functions. But Bergson, to be sure, did not draft his early work solely as a critique of experimental psychology. I hope to make clear that psychophysics and psychopathology served as springboards against which Bergson formulated his metaphysical edifice, including the concepts of the *durée* of consciousness and the virtual planes of memory. Although these concepts, and the force with which Bergson presented them, were uniquely his own, I contend in the following chapters that their stakes hinged on the problems articulated in the pages of the *Revue philosophique* and developed within a scientific spiritualist milieu.

Chapter 3: Measuring Consciousness

In the late nineteenth century, the *Revue philosophique* was the premier journal for experimental psychology, connecting humanists and researchers around the budding science both in France and across the continent. In fact, Friedrich Nietzsche was even a subscriber.¹ Preparations for *La Revue* began in 1875, when Ribot laid the groundwork for a new journal that would have “an open character,” as he described the idea to his companion and fellow psychologist Alfred Espinas. “The project was approved without reservation by [Francisque] Bouillier, [Charles] Lévêque, and [Jules] Lachelier,” three spiritualist philosophers at the École normale supérieure; yet there were two others, “[Émile] Caro is wary,” and “[Paul] Janet, still very hostile toward my direction, has begun to calm down.”² All would eventually contribute articles to the journal. But real excitement poured from Ribot when he relayed the news that he could “count on the articles of [Alexander] Bain, [Herbert] Spencer, [G.H.] Lewes, [Hippolyte] Taine, Wilhelm Wundt.”³ Ribot compiled an international dream team that would advance the new psychology in the nearly 1200 pages of the first year’s twelve issues. Ribot’s work ethic was unflagging. He edited the journal until his death in 1916. Yet his most remarkable skill was networking.

In addition to soliciting articles from fellow *normaliens* – classmates such as Espinas, Jules Tannery, and Gabriel Compayré who matriculated concurrently in philosophy at the École normale – Ribot also tapped the international circles that he had

¹ See Martin Stingelin, “Psychologie,” in *Nietzsche-Handbuch*, ed. Henning Ottmann, (Stuttgart: Verlag J.B. Metzler, 2000), 509-514.

² Théodule Ribot, letter to Alfred Espinas, 20 Apr. 1875, in “Lettres de Théodule Ribot à Espinas,” ed. Raymond Lenoir, *Revue philosophique* T. 147 (1957): 14.

³ Ibid.

formed while writing his first books. While writing *La Psychologie anglaise contemporaine*, the first popularization of associationist psychology in France, Ribot came in contact with Herbert Spencer. The two met in person in Paris in 1871, where their relation was cemented with Ribot's decision to translate Spencer's *Principles of Psychology* (published in France, 1872). Spencer put Ribot in touch with Léon Dumont and the Belgian psychologist Joseph Delboeuf who went on to champion German psychophysics in the *Revue*.⁴ The journal would serve as an unfiltered testing ground for Ribot's own psychological work.

Before 1876, there was no journal in France dedicated to experimental psychology. Most psychologists published their work in the *Revue scientifique*. In 1874 the journal's editor, Émile Alglave, requested that Ribot submit an article on Wundt's psychology. Keen to find a publisher for his own journal, Ribot had Alglave put him in touch with Gustave Germer Baillière. Although Ribot frequently spurned academics, he quickly climbed yet another intellectual ladder. Baillière ran one of the most prestigious Parisian printing houses that produced the library collections of contemporary philosophy, history, and science, in addition to the budding reviews of the period like *Revue des cours littéraires* and *Revue historique*.⁵ Baillière served as publisher of the *Revue philosophique* until fellow *normalien* Félix Alcan took over in 1881.

As the editor of what was rapidly becoming the premier French philosophy journal, Ribot turned the tables against the spiritualist establishment. "The *Revue*," Ribot wrote to Espinas, "has brought me harassment by the old spiritualists who, at the Institut [de

⁴ Laurent Mucchielle documents Ribot's extensive networks, "Aux origines de la psychologie universitaire en France (1870-1900): enjeux intellectuels, contexte politique, réseaux et stratégies d'alliance autour de la *Revue philosophique* de Théodule Ribot," *Annals of Science* 55 (1998): 263-289.

⁵ See Roger Chartier and Henri-Jean Martin, *Histoire de l'édition française* Vol. 3 (Paris: Fayard, 1990), 250-1.

France] perpetually conspire against me.”⁶ Once the authorities to which Ribot appealed as a philosophy student, academic philosophers now turned to the *Revue philosophique* in order to publish their material. The other major philosophy journal at the time was the *Revue des Deux Mondes*. Philosophers would have to wait until 1893 for the founding of *Revue de Métaphysique et de Morale* to find an alternative publishing outlet. The *Revue philosophique* helped usher in a booming era of academic publishing; and its success paved the way for Alfred Binet to found *L’Année psychologique* in 1894, the first French journal exclusively specializing in experimental psychology. Ribot fittingly served as Binet’s collaborator.

When the first issue appeared January 1, 1876, Ribot unveiled its purpose in unequivocal terms: “The *Revue* will dedicate its efforts to come to the aid of all who think that it does not suffice to shut oneself out from the world, and to enforce what is requested from all its collaborators: facts and documents.”⁷ Despite Ribot’s liberal gesture toward providing “a complete and exact tableau of the current philosophical movements, without excluding any school,” the target of his stern pronouncement was legible: the official spiritualism that replaced facts with “logical quibbles, imaginary creations, or mystical effusions.” Ribot left a token space open to metaphysics, but the majority of original articles, 188 in total between 1876 and 1890, were dedicated to the new experimental psychology.⁸

The *Revue philosophique* is a worthwhile source for an intellectual history of the

⁶ Théodule Ribot, letter to Alfred Espinas, Apr. 1876, “Lettres de Théodule Ribot à Alfred Espinas (1876-1893),” ed Raymond Lenoir, *Revue philosophique* T. 152 (1962): 338.

⁷ Théodule Ribot, “Introduction,” 2.

⁸ See Jacqueline Thirard, “La fondation de la ‘Revue philosophique’,” *Revue philosophique* T. 160 (1976): 401-413.

late nineteenth century because it elucidates the field of possible philosophical positions.⁹ Ribot was keenly aware of the makeup of each school. Given that the philosophy faculties of Parisian universities comprised a total of eighteen chairs, the influence of each school was easy enough to discern. But Ribot also played an active role in constituting scientific spiritualism as a distinct school among others. In the first issue of the *Revue* Ribot identified four schools: positivism (alluding to the inheritors of August Comte); the experimental school (in which he included himself); criticism (reflecting French neo-Kantianism led by Charles Renouvier), and “the spiritualism which in recent times has taken a new form here by finding its inspiration above all in Maine de Biran.”¹⁰ In principle, the *Revue* provided each school with “a neutral terrain where they could produce work, meet, and study each other.”¹¹ It was a marketplace of philosophical exchange, albeit one whose guiding hand was hardly invisible. Ribot’s exclusion of Cousin from the list was evident. A “new form” of spiritualism, he alleged, had taken Cousin’s place: a scientific spiritualism that jettisoned Cousin’s faculty psychology in an effort to stage a philosophical rapprochement with experimental psychology. The comment was more prescriptive than factual. If spiritualism hoped to survive, Ribot enjoined, then it ought to follow the return to Maine de Biran already underway.

Ribot, to be sure, did not champion scientific spiritualism. He sharpened the blade with which he carved up the philosophical landscape in an 1877 article, “Philosophy in France,” written for the British journal, *Mind*. Ribot opened his piece by rejoicing the demise of Cousin’s school of eclectic spiritualism. “The Revolution of 1848 struck a fatal

⁹ I borrow the idea of a field of possible philosophical positions from Jean-Louis Fabiani’s idea of “L’espace des possibles” in *Les philosophes de la république* (Paris: Les éditions de minuit, 1988), 73-102.

¹⁰ Théodule Ribot, “Introduction,” 2.

¹¹ Ibid.

blow at Eclecticism,”¹² and Ribot argued that philosophical knockout soon followed. “Eclecticism had been attacked by two eminent men who had been trained in it, M. Vacherot and M. Taine.”¹³ Étienne Vacherot maintained an ambiguous stance toward his teacher, Cousin. But Hippolyte Taine, whose *De l’intelligence* (1870) Ribot claimed as his intellectual compass, was the philosophical forefather of the new experimental psychology. He was head of what Ribot identified as the “experientialists” who took over the materialist mantle once claimed by positivism.¹⁴ As for positivism itself, Ribot identified Émile Littré (1801-1881) as the last spokesman to advance the project that Comte founded in the mid-nineteenth century. Others associated with the short-lived journal *La politique positive* still championed Comte’s positivist religion. Ultimately, however, the partisans of positivism rallied around experimental psychology to uncover the materialist foundations of consciousness.

Cousin’s eclectic spiritualism had given way to what Ribot identified as an emerging “mystical spiritualism, very hostile to eclecticism, whose place it makes every effort to usurp in the Faculties and *lycées*. The chief representatives of this school are Mr. Ravaisson, who is its leader, Mr. Lachelier, and Mr. Fouillée.”¹⁵ Ribot characterized the new spiritualism as mystic because “the school is far from priding itself on its precision.”¹⁶ But what is most striking about Ribot’s article is its diagnosis of a revolution *within* French spiritualism. Ribot suggested that the success of experimental psychology would not be the reason for the demise of Cousin’s eclectic spiritualism. Instead, “It is an enemy from within that tends to supplant it – that Spiritualistic

¹² Théodule Ribot, “Philosophy in France,” *Mind* 2, No. 7 (1877): 368.

¹³ *Ibid.*

¹⁴ *Ibid.*, 375.

¹⁵ *Ibid.*, 369.

¹⁶ *Ibid.*, 372.

Realism.”¹⁷

Ribot identified what was still a loose formation in 1877. Over the next three decades these thinkers, all of whom expressed their debt to the French spiritualist tradition yet sought to revolutionize its conceptual underpinnings on the basis of scientific advancements, rallied around scientific spiritualism. “The *new spiritualism*,” the philosopher Étienne Vacherot wrote in his 1884 book on the movement, “is not a new doctrine: it is spiritualism renewed by science.”¹⁸

Indeed, the lines between this new spiritualism and the old spiritualism were drawn around the experimental research disseminated in the *Revue philosophique*. There an old guard continued to defend Cousin’s brand of eclectic psychology against Ribot’s scientific methods. “The interior life of man has been reduced once again to sensation, having become the simple consciousness of an organic state,” Jules Lachelier warned in “Psychologie et métaphysique,” his 1885 confrontation with the emerging experimental psychology in the *Revue philosophique*.¹⁹ Lachelier discerned in the new psychology a reversion to a bygone sensationalism: “The will is no more than the consciousness of reflex movement, thought no more than relation between two or several sensations, and reason no more than a résumé or even excerpt of sensible experience.”²⁰ Even though Lachelier, as I explored in the last chapter, posited the concept of contingency as an exception to Cousin’s narrow eclecticism, the threat he discerned in Ribot’s research program prompted his re-allegiance with the old spiritualism. Lachelier allied with an older generation of spiritualist thinkers, including Paul Janet, Adolphe Franck, and Elme

¹⁷ Ibid., 386

¹⁸ Étienne Vacherot, *Le nouveau spiritualisme* (Paris: Hachette, 1884), i.

¹⁹ Jules Lachelier, *Psychologie et métaphysique* (Paris: Presses universitaires de France, 1949), 4, originally published in *Revue philosophique* T. 19 (1885): 481-516.

²⁰ Ibid.

Caro, who buttressed their forefather's legacy as a safeguard against the nascent science's rapid encroachment on what they saw as spiritualism's metaphysical authority. In contrast, scientific spiritualists seized ahold of new quantitative and physiological methods to articulate new metaphysical problems.

Associationism and Evolution

The discovery of the central nervous system and the philosophy of associationism respectively constituted the scientific and conceptual edifices informing the development of nineteenth-century experimental psychology. Associationism furnished the explanatory framework to structure consciousness within the body's sensori-motor network. At stake in scientific spiritualists' engagements with the explosion of psychological research was the problem of whether the methods of nervous physiology and the associationist account of consciousness were, on the one hand, inseparable, the obverse medical and theoretical faces of experimental psychology as Ribot argued, or, on the other hand, extrinsic to each other, associationism being suited to the study of the body's biological systems but not to the study of consciousness. Spiritualists since Maine de Biran and Félix Ravaisson had recognized that the discovery of the central nervous system fundamentally overthrew the framework of introspective psychology. Nervous physiology, they believed, upended the theory of the faculties and replaced it with a theory of embodied mental activity. But associationism, these spiritualists argued, was equally dubious in that it relied on a reductive picture of consciousness mirrored on nervous movement. In this section I explore the critique of associationism, first

articulated by Maine de Biran and Ravaisson, which provided a philosophical archive that scientific spiritualists invoked in their engagements with the theoretical underpinnings of experimental psychology.

Charles Bell (1774-1842) and François Magendie (1783-1855) discovered the sensory and motor operations of nerves in their experiments on the spinal cord and ventral root. Working independently, Bell and Magendie both observed whether these regions reacted to stimuli after being anaesthetized. Bell and Magendie experimented on animals by cutting the dorsal section of their spinal cords, the peripheral region that extends laterally, and noticed that the animals became insensitive to stimulation. The animals were nonetheless able to move the anaesthetized area despite not feeling pain. When Bell and Magendie compressed the ventral root, the peripheral region on the obverse side of the spinal chord, the animals shrieked in pain. Yet surprisingly, the animals were unable to move the affected area. Bell and Magendie concluded that these two regions, what we now call the dorsal and ventral roots, are the respective seats of sensation and motility. They are the points lining the spine to which sensory and motor nerves attach. What followed, the Bell-Magendie law, holds that the motor and sensory impulses travel in opposite directions in accord with the two sides of the spinal cord.

Johannes Müller (1801-1858) deepened physiologists' understanding of the central nervous system when he articulated the law of specific nerve energies in his *Handbuch der Physiologie des Menschen* (1834-1840). The law holds that the character of experiences depends on the particular nerves responding to stimulation rather than on characteristics of the stimulation itself. The sense organs thus translate humans'

knowledge of the external world into a subjective form, a conclusion that, for Müller, barred unmediated knowledge of objects in themselves.

Research into the nervous system was critical for associationist psychologists.²¹ The formation of reflex mechanisms through nervous impulses served as a model from which to explain the formation of psychological associations. Sensory organs and ideas alike could share, as it were, the same pattern of concatenation. According to Robert Young, “The significance of the nineteenth-century analysis [of the sensory-motor account] lay first in its experimental demonstration in the central nervous system and second in the progressive extension of the concept as the fundamental explanatory principle in both physiology and psychology.”²² The progressive extension of the sensory-motor account into experimental psychology relied on the principle of associationism for its theoretical apparatus.

Associationism explains the generation of ideas on the basis of the relations formed between their constituent parts. Consciousness, on this model, functions like a hierarchy: ascending from the most primitive sensations to the most advanced ideas follows a ladder of associations along which each higher rung combines the parts belonging to lower rungs. What begins as a lower-order relation between sensations transforms into a higher-order bond, or association, forged through repetition. Repetition over time perfects the execution of a skill or the application of a concept by uniting otherwise discrete sensations. Although psychologists in the nineteenth-century debated the rank of certain ideas within the ladder of associations, their underlying commitment

²¹ Daniel Robinson presents the Bell-Magendie law and the law of specific nerve energies alongside phrenology as the three discoveries of the nineteenth century that associationists used to support their model of psychology. *An Intellectual History of Psychology*, 338-340.

²² Robert Young, *Mind, Brain and Adaptation in the Nineteenth Century* (New York: Oxford University Press, 1990), 93.

was that repetition is the motor of association: repetition, that is, generates a determinate link between sensations whose relationship was previously indeterminate. Herbert Spencer, offered the most succinct definition of the law of association, which he called “the law of intelligence,” “that the strength of the tendency which the antecedent of any psychical change has to be followed by its consequent, is proportionate to the persistency of the union between the external things they symbolize.”²³ The more frequent the repetition, the more intense the association.

David Hartley was the first to apply the principle of association to the problem of the generation of ideas. His *Observations on Man, his Frame, his Duty, and his Expectations* (1749) began with the interaction between the nervous system and its environment. Neuronal vibrations produce basic relations that he called “vibratiuncules.” When repeated, they become fortified relations, generating the higher rungs of associations of sensations, sentiments, memories, imagination, language, judgments, and ultimately free acts. Ascending the ladder follows from physical associations that regulate automatic processes and toward mental associations that engender voluntary processes. The ascent also transitions from simple to complex associations: rudimentary repetitions occur simultaneously in time while more complex repetitions occur successively. Hartley used the example of an infant developing language skills by first producing noises that he feels differently, repeating them enough to regulate his vocal organs and, ultimately, assigning meaning to the noises. The stimulation of the larynx and the noise that the vocal chords create first occur one after the other. Once they become a single coordinated

²³ Herbert Spencer, *Principles of Psychology* (London: Longman, Brown, Green, and Longmans, 1855), 529.

act, the infant develops noises into words, and perfects the skill of speaking to the point that speech becomes a voluntary, and even artistic act.

The distinction between automatic processes and voluntary ones drove Hartley to endorse the principle of psychophysical parallelism, according to which associations between sensations and ideas develop alongside associations between purely physical vibrations. A nervous event, that is, accompanies every psychological event. Parallelism facilitated Hartley's objective to unite Locke's empiricist account of the generation of ideas with Newton's discovery of optic vibrations. Locke explained the formation of higher-order ideas from lower-order sensations, while neuronal vibrations, on Newton's model, constituted the substratum of mechanical laws regulating associations as they propagate throughout the body. Hartley's parallelism established the framework for the British associationist school generally, and for Ribot in particular, who championed parallelism as the bridge joining the physiological in relation with psychological.

Although Ribot found Hartley's exclusively nervous physiology modeled on *vibratiuncules* inadequate, too formal and hardly experimental, he defended Hartley as the originator of associationist psychology in his Latin thesis: *Quid David Hartley de consociatione idearum senserit* (1873). The Sorbonne required two theses for a doctorate in philosophy, one written in Latin and dedicated to a historical topic, and another in French and dedicated to a contemporary topic. Ribot, however, was the first to dedicate both his theses to contemporary topics for his defense in 1873. Ribot's French thesis, *L'Hérédité: étude psychologique sur ses phénomènes, ses lois, ses causes, ses conséquences* (1873), demonstrated how physiological heredity, already explained in

Darwin's *The Variation of Animals and Plants Under Domestication* (1868), could be extended to a psychological level.

Herbert Spencer's psychology was, for Ribot, the key. Spencer explained heredity by applying associationist principles to an evolutionary scale: "The doctrine that the connections among our ideas are determined by experience, must, in consistency, be extended not only to all the connections established by the accumulated experiences of every individual, but to all those established by the accumulated experiences of every race."²⁴ For Spencer, the associations supporting behavior in the species guide the associations supporting individuals' behavior. The former are stronger because they have been repeated across a hereditary line of descent. Ribot made use of Spencer's evolutionary associationism by demonstrating how indissoluble associations in the species account for the persistence of inherited traits in individuals. Heredity finds its foundation, according to Ribot, in the lineage of traits coded into the nervous systems of species over time – a ladder of associations formed across natural history.

By writing his theses on Hartley and Spencer, Ribot paired together the thinkers who respectively originated and culminated associationist psychology. No one before him had dedicated a philosophy thesis to physiological psychology. When he appeared at his defense, Ribot threatened what Serge Nicolas describes as the spiritualist authority of the jury at the Sorbonne.²⁵ These philosophers took issue with Ribot's reduction of the soul to biology. Ribot responded by limiting the scope of the principles of associationism and parallelism. He clarified that associationism is not an exhaustive principle. Hartley, Ribot assured his critics, could not explain free actions, which are irreducible to

²⁴ Ibid.

²⁵ Serge Nicolas, "L'hérédité psychologique d'après Théodule Ribot (1873): la première thèse française de psychologie 'scientifique'," *L'année psychologique* 99, no. 99-2 (1999): 295-348.

secondary automatic responses. And as for heredity, Ribot insisted that the intriguing problem in natural history was the exceptions to the identity of inherited traits: the individual aptitudes that inject diversity and previously unforeseen traits into the species. These psychological peculiarities follow their own laws; they are concomitant with physiological laws but not reducible to physiological causes. Ribot thus fell back on the principle of psychophysical parallelism in his defense. He claimed not to have refuted metaphysical claims to the union of the mental and physical; his aim was instead to absolve physiological psychology from entertaining metaphysical questions at all.

Ribot's *L'Hérédité* offered French readers a belated introduction to evolutionary theory. Darwin failed to find as much enthusiasm in France as he did elsewhere on the continent following the 1859 publication of *On the Origin of Species*. The fact has been widely attributed to the lingering influence of the nation's own evolutionist, Jean-Baptiste Lamarck, and his theory of the inheritance of acquired characteristics.²⁶ Lamarck's emphasis on *transformisme*, many thought, competed with Darwin's model of the struggle for survival. Indeed, it was only with Ribot's support five years after the publication of *L'hérédité* that the French Académie des Sciences accepted Darwin as a corresponding member. Ribot wholeheartedly endorsed Darwin, but it was in Spencer's associationism that *L'hérédité* packaged evolutionary theory for a skeptical readership. Moreover, evolution, as Ribot presented it, was part and parcel of associationism. And Ribot found Spencer's theory, more than Darwin's, serviceable to the study of consciousness. "Evolution is a change," Spencer held, "from an indefinite, incoherent

²⁶ For a discussion of France's exception from European interest in Darwin see, H. Graham Cannon, *The Evolution of Living Things* (Manchester: Manchester University Press, 1958), 17-20; Robert E. Stebbins, "France," in *The Comparative Reception of Darwinism*, ed. Thomas F. Glick, (Austin: University of Texas Press, 1972), 119-165.

homogeneity to a definite coherent heterogeneity through continuous differentiations and interpretations.”²⁷ Ribot championed the maxim in support of the continuity of psychic evolution and biological evolution. The stronger the association, the more complexity, or heterogeneity, it introduces in the species. The most evolved mental operations thus ascend from the hereditary chain of more basic, or homogenous, associations. Thanks to Ribot, evolutionary theory initially took off in France as a psychological doctrine, rather than as an exclusively biological doctrine.²⁸

Scientific spiritualists critical of Ribot’s evolutionary psychology built upon the critique of associationism already developed by their nineteenth-century predecessors. According to Maine de Biran and Ravaissou, associationism amounts to a mechanistic model of consciousness that reifies ideas as if they were composed of physical matter. The thrust of their argument, as I explored in the first section, was that associationism conflates ideas with nerve impulses, and thus neglects the essential difference between the two: whereas nervous associations depend on an external relation between discrete nerve impulses, consciousness depends on an internal principle of the will. Nervous associations are reinforced through the repetition of coextensive sensations. And associative bonds are formed between nerve impulses. Ideas, however, are not discrete entities, and as such, repetition is not the sole motor that generates bonds between ideas. Both Biran and Ravaissou made the argument in their respective treatises on habit. Like associationist psychologists, they understood consciousness as a product of habit. But whereas associationists were committed to the idea that repetition alone generates associations, Biran and Ravaissou argued that in humans, habits depend at bottom on a

²⁷ Herbert Spencer, *First Principles* (London: William & Norgate, 1862), 584.

²⁸ D.P. Faber, “Théodule Ribot and the reception of evolutionary ideas in France,” *History of Psychiatry* 8 (1997): 445-458.

free act of the will. Biran forcefully made this argument against sensationalism: the free exercise of effort is necessary to generate the self-reflexive structure of consciousness. As he wrote in his treatise on habit, “Effort necessarily carries with it the perception of a relation between the being who moves or who wants to move, and an obstacle opposed to its movement. Without a subject or a will that determines the movement, without a term that resists, there is no effort, and without effort no consciousness, no perception of any kind.”²⁹ The activity of motor effort is unique in that it unifies the body’s energy around a point of resistance. The physiological energy unified in effort engenders the unity of consciousness that all ideas entail. It was this sense of internal unity that Biran charged associationism with neglecting. It constitutes the structure of consciousness that cannot be analyzed from the outside, as it were, in a laboratory. In *De L’habitude*, Ravaisson radicalized Biran’s argument that consciousness depends on effort. Effort, and not passive repetition, is the proper animating principle, which, Ravaisson held, generates conscious activity:

It is not, as has been supposed, the ideas or images that call one another to come together, that attract, or that move towards each other with increasing speed, like bodies gravitating in space. In images and ideas there is no movement or principle of movement. It is not the association of ideas that explains habit, it is rather by the law, by the principle of habit that the association of ideas can be explained.³⁰

Although not all philosophers critical of the mechanistic bent in associationism assented to the primacy that Biran and Ravaisson afforded to the unique experience of effort, these thinkers did establish a framework for scientific spiritualists’ engagements with experimental psychology: associationism neglected the free activity that lends unity and

²⁹ Maine de Biran, *Influence de l’habitude sur la faculté de penser*, ed. Pierre Tisserand (Paris: Presses universitaires de France, 1953), 75.

³⁰ Félix Ravaisson, *Of Habit*, trans. Mark Sinclair (New York: Continuum, 2008), 73.

fluidity to consciousness. Yielding to scientific progress, yet critical of associationist principles, scientific spiritualists sought to confine associationism to the functions of the nervous system in order to make room for non-mechanistic account of conscious activity.

Scientific spiritualists, however, went beyond Biran and Ravaisson's critique of associationism by engaging experimental psychology along two axes. The first was negative. Scientific spiritualists sought to delimit the appropriate domain of experience to which the results of experimental psychology were applicable. At stake was more the reach, and less the veracity, of these results. The second was positive. Scientific spiritualists sought to articulate within the dual scientific frameworks of nervous physiology and evolutionary theory a conceptual vocabulary tailored to the free activity of consciousness that was also rigorous enough to rival associationism. The success of these thinkers' project hinged on demonstrating that a metaphysical logic appropriate to subjective reflection could explain consciousness as a kind of activity distinct from the sensory-motor activity explained by experimental psychologists.

Generally, it was against Spencer's evolutionary theory that these scientific spiritualists leveled their negative critique of associationism. They belonged to a generation that Daniel Becquemont and Laurent Mucchielli characterize as "young philosophers who stood out in the years of the 1880s successively trying to complete, to amend and often, as it were, to "re-spiritualize" Spencer's apparently materialist evolutionism."³¹ Excitement attended Spencer's promise to situate consciousness within the natural world of competing forces. A young Bergson felt the enthusiasm while studying at the École normale, yet he found Spencer's associationism unsatisfying. "We

³¹ Daniel Becquemont and Laurent Mucchielli, *Le cas Spencer* (Paris: Presses universitaires de France, 1998), 273.

felt the weakness of *The First Principles*,” Bergson reflected, “But this weakness appeared to us to come from what the author, insufficiently prepared, could not deepen in the “last ideas” of mechanics. We had wanted to take back this part of his work, complete it, and strengthen it.”³² Bergson belonged to a movement, I am suggesting, freshly animated by evolutionary theory, finding in it an antidote to the perceived sterility of Cousin’s eclectic historicism, all the while committed to the spiritualist defense of freedom.

Specifically, it was in dialogue with the fields of psychophysics and psychopathology that scientific spiritualists advanced a positive logic of conscious activity. As I explore in this and the following chapter, Gustav Fechner and Ribot developed these respective fields by formulating causal laws appropriate to each: Fechner’s law explained the perception of sensations on the basis of excitations; Ribot’s law explained the order of memory loss in amnesia. Scientific spiritualists dedicated their writings to advancing a rival conceptual vocabulary that would explain the facts of consciousness occluded by Fechner’s and Ribot’s studies while nevertheless remaining within a naturalistic framework.

Gustav Fechner’s Psychophysics

Ribot positioned psychophysics in the first issue of his *Revue philosophique* as the new foundation of scientific psychology, “without which, whatever may be said, no

³² Henri Bergson, *La pensée et le mouvant* (Paris: Félix Alcan, 1934), 8.

research in psychology is possible.”³³ Ribot’s interest in the matter was also personal. In a letter to a former professor at the École normale, Ribot characterized the journal’s opening article, which he had been working on for months, as “my entry into the German Psychology that I really want to put on display.”³⁴ In it, Ribot drew on Wundt’s applications of Fechner’s law in order to calculate the time it took to perceive different sensations. Ribot brought together the measurements that Wundt conducted in his laboratory on the amount of time that elapsed between applying a stimulus, whether tactile, auditory, or visual, and the subsequent movement by which a human subject recognized the sensation. By changing the conditions under which the stimulus was applied, such as its intensity and frequency, Wundt claimed to offer a comparative account of the durations of conscious perceptions. He demonstrated that the time it took to perceive external stimuli diminished with their repetition. By contrast, acts of perception repeated fewer times, such as recalling memories, were shown to require greater attention and thus take longer.

If consciousness could be broken down into quantifiable acts of perception, then they could serve as what Ribot called the “basic givens” [*données vulgaires*] of consciousness, and their duration could be measured. Herein lay the stakes of the scientific spiritualists’ engagement with psychophysics: what constituted the fundamental constituents of consciousness, what Bergson called the “immediate givens” (or as the title of his *Essai* is translated, the “immediate data”) [*les données immédiates*]? Whereas psychophysics posited stimulation and perception as basic givens of consciousness,

³³ Théodule Ribot, “De la durée des actes psychiques d’après des travaux récents,” *Revue philosophique* T. 1 (1876): 268.

³⁴ Théodule Ribot, letter to Charles Lévêque, 21. Aug 1874, MS 2563, Papiers de Charles Lévêque, Manuscrits de la Bibliothèque de l’Institut de France, Paris.

scientific spiritualists advanced, as I will discuss later, qualitative descriptions of conscious experience as the basic givens. Both sides, I want to stress, shared the same problem. It is critical not to treat the two as opposed positions locked in conflict, nor to interpret experimental psychologists such as Ribot, Fechner, and Wundt as having initiated an outright departure from metaphysics. Both shared much in common, as Kurt Danziger affirms,

If the tradition of mental philosophy, with its notion of introspection as method, bequeathed to the new psychology the concept of an inner mental world as a potential object of study, the model of physiological experimentation left the new discipline no choice but to pursue this study in a functional framework. The investigation of sensation and perception was virtually the only area in which these two approaches could be effectively combined, and the greater the pressure to expand beyond these confines the greater the methodological difficulties that the new discipline faced.³⁵

The science of measuring sensations began with Ernst Heinrich Weber (1795-1898). Professor of anatomy and physiology in Leipzig, Weber conducted experiments aimed at discriminating the threshold for perceiving sensations. Weber had subjects lift weights. Beginning with a certain weight, subjects gradually increased the kilograms lifted until they first noticed a different sensation. For example, a subject would lift 10 kilograms. He would then lift 10.5, 11, 11.5 kilograms; but he would not notice the change in weight until he lifted 12 kilograms. The difference between the first sensation of the initial stimulus (10 kilograms) and the second sensation and of a stronger stimulus (12 kilograms) constitutes what Weber called the “just-noticeable difference.” It indicates the threshold through which consciousness passes before perceiving a different sensation. Weber inferred from his experiments that a constant proportion holds between an

³⁵ Kurt Danziger, *Constructing the Subject. Historical Origins of Psychological Research* (New York: Cambridge University Press, 1990), 27.

increase in the stimulus and the just-noticeable difference. So if the same subject lifted 40 kilograms, she would only perceive a more intense sensation when lifting 48 kilograms: the reason being that the proportion of the just noticeable difference to the original stimulus ($2 / 10 = .2$) would also hold for the subsequent stimulus ($8 / 40 = .2$). Weber applied his original experiments using weights, first published in 1834,³⁶ to other types of sensations, such as the lengths of lines perceived in vision and the volumes perceived in hearing. His enduring contribution to experimental psychology was the principle of the just-noticeable difference, which linked the psychological domain of perception to the physiological domain of stimulation in quantitative terms.

Weber's work fascinated Gustav Theodor Fechner (1801-1887) when he was a young student at Leipzig. By 1828, Fechner retrospectively christened the idea that there is a constant proportion between excitation and sensation as "Weber's law."³⁷ In 1860 it served as the foundation for the field that Fechner christened "psychophysics": "the exact science of the functional relations of dependence among body and soul, more generally, between the corporeal and the mental, the physical and the psychological, world."³⁸ The functional relation holds between the constant increase in a stimulation and the corollary increase in a sensation. By means of a derivation, Fechner demonstrated in mathematical terms that the intensity of sensation follows a logarithmic increase in the strength of the stimulus.³⁹ In other words, the rate at which a perceived sensation intensifies gradually

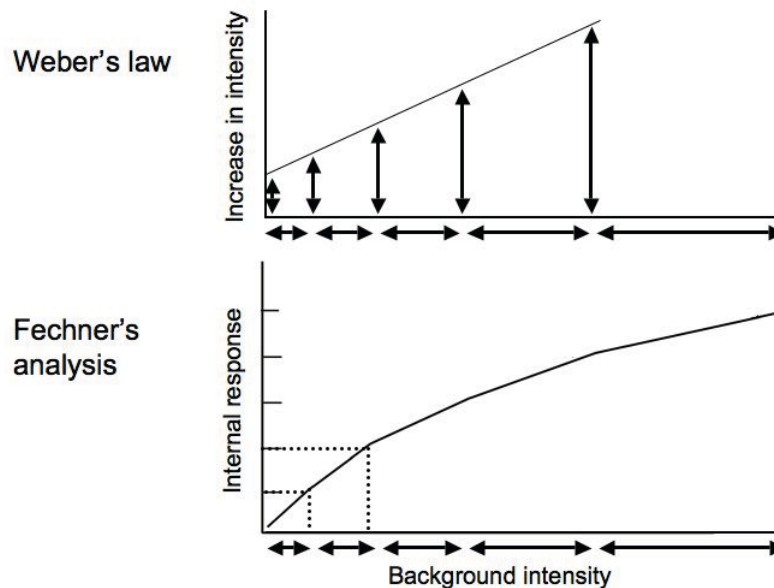
³⁶ Ernst Heinrich Weber, *De pulsu, resorptione, auditu et tactu. Annotationes anatomicae et physiologicae* (Leipzig: C.F. Koehler, 1834).

³⁷ Jean-Baptiste Biot, *Lehrbuch der Experimental-Physik oder Erfahrungs-Naturlehre* Vol. 3 (Leipzig: Leopold Voß, 1829). Although the five volume series was published under Biot's name, Fechner wrote the entire third volume.

³⁸ Gustav Fechner, *Elements of Psychophysics*, trans. Helmut E. Adler, eds. Davis. H. Howes and Edwin G. Boring (New York: Holt, Rinehart and Winston, 1966), 6, originally published as *Elemente der Psychophysik. Erster und zweiter Theil* (Leipzig: Breitkopf und Härtel, 1860).

³⁹ For a thorough mathematical explication of Fechner's law, see Michael Heidelberger, *Nature*

tapers off the more forcefully a stimulus is applied. Considering a stimulus such as light, the focus of Fechner's mature work, a constant increases in the wattage produces a progressively smaller increase in the brightness perceived.



Fechner's ambition far surpassed Weber's. Whereas Weber's work was limited to measuring the strength of a stimulus, Fechner's ambition was to measure the perceived intensity of sensation itself. Ultimately, Fechner's work laid the foundations of future quantifying practices in psychology. Rather than statistically aggregate the collective responses of a mass number of subjects to the same experiment, Fechner introduced quantification into the very structure of psychological experimentation. He did not jettison subjects' responses. They played an integral role in his experiments as he paired them with numerically graded stimulus series so that subjects would respond to each stimulus in binary form, such as heavier / lighter, stronger / weaker. This was the just-noticeable difference. While Weber left the internal depths of sensation mysterious,

From Within: Gustav Theodor Fechner and His Psychophysical Worldview, trans. Cynthia Kloor (Pittsburgh: University of Pittsburgh Press, 2004), ch. 6.

Fechner's insight was to use the principle of a just-noticeable difference as the point of departure for constructing an external means of measuring sensations and thus shining a light on their internal mystery.

The problem that Fechner confronted was the impossibility of directly measuring psychological phenomena. They cannot be analyzed directly since sensations occur at different moments in time, hence they cannot be compared side by side. This is why Weber could not simply subtract one sensation from another in order to ascertain their difference. He only arrived at a difference between the magnitudes of different stimuli. In order to compare sensations, there must be an independent rule that measures one against another. The same holds true for any natural phenomenon. We use the spatial distance covered by a clock's hand, for example, to measure the duration of time. The clock indicates by an independent and formalized rule the passage of time. Fechner treated the intensity of the stimulus much like the hands of the clock: the former provided the independent and formalized rule to measure sensations. But the stimulus only bears an indirect relation to sensation. A clock, however, directly indicates the passage of time. The distances between its hands are quantitative indicators that mensurate the uniform quality of time. Since time is the sort of natural phenomenon that is equal throughout (at least within the limited range of earth's temporality) it can be broken up into equal parts; and those equal parts, time's equal passages, can be measured by the equal distances on the clock. Now, although stimuli do have equal magnitudes, such as the kilograms of weight or the watts of light, it is not immediately apparent that sensations exhibit similar homogeneity such that their intensities can be broken into equal parts. Fechner took it as his task to demonstrate that sensations have constant degrees of difference, and he did so

indirectly – that is, in terms of the magnitude of stimuli. Fechner used the just-noticeable differences as the basic units of sensation. The homogenous dimension shared among sensations, allowing them to be divided into equal parts, is the character of a sensory threshold, the psychological gap that Weber demonstrated between sensations. Fechner showed that a sensation is a collection of just-noticeable differences that are added together as a stimulus becomes stronger. Since there is a gap between each increasing sensation at the same time that there is continuity between each increase in stimulation, Fechner could mathematize the relation between the two in terms of a logarithm. The key feature of Fechner's discovery, however, was to show that the logarithm could indirectly measure sensations: the magnitude of the stimulus also functions as the independent rule to compare sensations.

The migration of Fechner's psychophysics to France principally came via Ribot's translations. But Ribot found indispensable help in Joseph Delboeuf, who regularly wrote on the measurement of sensations in the *Revue philosophique*.⁴⁰ Professor of psychology at the Université de Liège, Delboeuf first popularized Fechner's work in *Études psychophysiques sur la mesure des sensations* (1873) and proceeded to conduct his own quantitative experiments in *Éléments de psychophysique* (1883). Perhaps the most well known exemplar of psychophysics in France was Charles Féré's studies of the dynamometer.⁴¹ Originally constructed to measure the torque of engines, Féré made use of Fechner's principles in order to adapt the device to measure the muscular force of

⁴⁰ Joseph Delboeuf, "La loi psychophysique: Hering contre Fechner," *Revue philosophique* T. 3 (1877) : 225-263; "La loi psychophysique et le nouveau livre de Fechner – I," T.5 (1878) : 34-63; "La loi psychophysique et le nouveau livre de Fechner – II," T.5 (1878): 127-157; "Le sentiment de l'effort," T. 12 (1881) : 513-527.

⁴¹ See Charles Féré, *Sensation et mouvement: études expérimentales du psychomécanique* (Paris: Félix Alcan, 1887).

human movement. After he initially worked with a dynamometer to measure the pressure of the grip of a subject's hand, Féré applied the device to the perception of color, and went so far as to argue that he could measure the muscular effort involved in attention.⁴²

Quality and Quantity in Conscious States

The initial problem at stake in Bergson's first book, *Essai sur les données immédiates de la conscience* (1886) was whether quantitative measurement could apply to the conscious perception of sensations. Bergson acknowledged that measurement could grasp a certain dimension of sensations. The force of his criticism was to demonstrate that in addition to the quantitative dimension of consciousness that would measure sensations, there is another distinct dimension of consciousness that cannot be measured. This qualitative dimension can only be grasped by philosophical introspection. At stake, therefore, was the division of labor between scientific and philosophical analysis. Bergson's project was to demonstrate that there are independent dimensions of conscious experience with which each accord. And as such, there are distinct logics that philosophical introspection and experimental observation apply to each domain.

The *Essai* was part of a wider debate over the nature of the immediate data of consciousness. Whereas the psychophysical method subjected consciousness to measurement and verification, scientific spiritualists, by contrast, argued that consciousness included an irreducibly qualitative dimension – what can be understood of as a proto-phenomenological dimension – that escapes experimental observation. The

⁴² See Anson Rabinbach, *The Human Motor: Energy, Fatigue, and the Origins of Modernity* (New York: Basic Books, 1990), 30.

debate over the immediate data of consciousness turned on how to explain the nature of the basic givens of consciousness. Do the basic data of consciousness admit mathematical analysis, as Fechner's proponents held? Or are there other qualitative data that are equally if not more basic, as new spiritualist thinkers held? In his refutation of psychophysics, Bergson drew on a philosophical debate over the qualitative and quantitative dimensions of consciousness that Fechner had incited among scientific spiritualists.

Jules Tannery on Sense and Quality

The stakes of the distinction between quality and quantity first played out in the pages of the *La Revue scientifique* following the publication of an anonymous article in 1875. The author challenged Fechner's extrapolation of a differential equation from Weber's law: "When we don't know at all what signifies the difference between two sensations, how can we speak of the differential of a sensation? What relation is there between a differential and the fact that, by varying the excitation, we ascertain a moment when the sensation changes? Between the two, there is neither quantity nor continuity."⁴³ The author was taking aim at Fechner's attempt to measure sensations. He claimed that there is no uniform standard by which to compare different sensations as equal, since each sensation is perceived under a unique quality. That is to say that sensations are wholly different from each other, and not different according to a common standard. The author charged that Fechner could only construct a common standard to compare sensations by smuggling into the inner perception of sensations the external measurement

⁴³ Jules Tannery, "Correspondance: A propos du logarithme des sensations," *La Revue scientifique* 4, no. 37 (1875): 16-17.

used to compare stimuli. But the qualitative nature of inner perceptions, the author affirmed, is not commensurable with the quantitative nature of observable measurements:

Sensation is a phenomenon occurring in us, which we seize in ourselves by its interior side, as it were, and which rebels against any kind of measurement. Without a doubt, a sensation can be more or less intense, but does that suffice to make the sensation as a quantity? A quality, beauty for example, can also be lesser or greater. The only *magnitudes* that one can measure directly are those of which one can define equality and addition, and such magnitudes seem to be met only in the domain of abstraction, of pure mathematics.⁴⁴

The argument amounts to distinguishing quality and quantity by apportioning each to their appropriate dimensions of consciousness. Since the logic of quantity suits the external dimensions of consciousness, as observed from a third person perspective, it is inapplicable to the inner dimension of consciousness, as experienced from a first person perspective. The consequence the author drew was that a quantitative logic could at best set up a convention for comparing sensations against stimuli; but the convention would never capture the immediate quality of sensations as they are immediately experienced.

The anonymous author turned out to be Jules Tannery (1848-1910). A young mathematician at the École normale, Tannery was friendly with much of the philosophy faculty there. Although he would become known as one of the greatest mathematical minds of late nineteenth-century France, a deep metaphysical commitment animated his work. It was Jules' older brother Paul Tannery (1843-1904), a historian of ancient science and editor of Descartes' work, who disclosed his younger brother's identity. Fittingly, it was in an article in the *Revue philosophique* that pursued the critique Jules had originally launched.⁴⁵ The two brothers tackled Fechner's law together. Jules Tannery entrusted

⁴⁴ Ibid.

⁴⁵ Paul Tannery, "Critique de la loi de Weber," *Revue philosophique* T. 17 (1884): 15-35.

Paul Tannery to publish his articles.⁴⁶ Paul Tannery was close to the editor of the *Revue scientifique*; yet Jules valued his anonymity. “If he had not been genuinely horrified by any publicity,” one commentator writes, “if he had not rather dedicated himself to not appearing as a creator of metaphysical systems, his name would have been soon known among the public like those of philosophers who are fashionable to admire much more than read.”⁴⁷ Although Jules Tannery had little taste for the obsequious notoriety conferred on grand metaphysicians, his articles were the first to publically stake out the positive project driving the scientific spiritualist engagement with psychophysics: to articulate a qualitative logic of sensations appropriate to the inner dimension of consciousness.

The difficulty facing Jules Tannery’s critique was that his definition of “quality” remained murky: “We should be skeptical of pompous expressions and a mix of sensations, logarithms, and stimuli,” but as for an alternative mode of explanation, Tannery wrote, “*I confess that I have this logarithm in my heart.*”⁴⁸ Ribot promptly responded that Tannery failed to distinguish questions of metaphysical and physiological psychology: “The first are by their nature insoluble and one can say whatever one wants. The second are questions of fact.”⁴⁹ Ribot and other psychologists believed that the scope of quantitative measurement was limitless. There was no dimension of conscious experience, as Delboeuf added to the debate, that could not be translated into quantitative data: “From the moment that one thing is greater or lesser, even beauty, even the pleasure

⁴⁶ Jules Tannery, letter to Paul Tannery, 1874 in Paul Tannery, *Mémoires scientifiques* Vol. 15 (Paris: Cauthier-Villars, 1939).

⁴⁷ Émile Bordel, “Introduction,” in Jules Tannery, *Science et philosophie*, ed. Émile Bordel (Paris: Félix Alcan, 1912), xiii.

⁴⁸ Jules Tannery, “Correspondance: A propos du logarithme des sensations,” 17.

⁴⁹ Théodule Ribot, “Correspondance: A propos du logarithme des sensations,” *La Revue scientifique* 4, no. 37, (1875): 17-18.

I feel at the sight of a beautiful painting or the hearing of an opera, even if it presents the most obscure of metaphysical reasoning to thought, it can be said that this thing has a size, it has measure, and it is theoretically measurable.”⁵⁰

In order to advance a more rigorous account of quality, Tannery took as his task to explain how, as Wundt accurately described it, “a quality such as beauty can be larger or smaller, but depend on a difference that is not a quantitative.”⁵¹ In his rejoinder, Tannery set about distinguishing two ways of comparing quantitative and qualitative differences. He did so by considering two kinds of magnitudes: homogenous magnitudes that can be compared quantitatively and heterogeneous magnitudes that cannot. The difference is that comparing the augmentation or diminution of an object with homogenous magnitude changes nothing in the nature of the object. This is the case for magnitudes such as length, surface area, or time. But change in an object whose magnitude is heterogeneous changes the nature of the object. For an example, Tannery considered the impression of beauty when standing before the Venus of Milo. Neither the length of her form, nor the area that the sculpture occupies, nor even the time spent gazing at it could approach a quantitative measurement of its beauty. Moreover, subtracting an arm, or adding a leg, would change the entire composition of the sculpture. But the Venus’ beauty could nonetheless be compared to that of other great sculptures. All this goes to show, Tannery affirmed, that aesthetic sentiments like beauty could be likened to a heterogeneous magnitude admitting degrees: “certain works impress us more

⁵⁰ Joseph Delboeuf, *La Revue scientifique* 4 no. 43 (1875): 11.

⁵¹ Wilhelm Wundt, *La Revue scientifique* 4, no. 43 (1875): 13-14.

than others. But between these diverse impressions, isn't there not a difference of more and less, but *a difference of nature?*"⁵²

Aesthetics provided Tannery with the conceptual language for articulating a qualitative logic of sensations. The aesthetic character of sensations is singular: a world stands between the Venus of Milo and, say, Michelangelo's *David*. Both stir aesthetic sentiments that Tannery thought could be compared according to a shared standard. But their comparison depends on describing singular aesthetic qualities on the basis of a heterogeneous magnitude.

Tannery's choice of aesthetic examples as the basis of his critique gained purchase in the debate with the publication of Fechner's *Vorschule der Aesthetik* in 1876. The French translation followed that year and offered an outlet for psychophysics' popularization outside the pages of the *Revue philosophique*. In opposition to philosophical aesthetics, which drew its aesthetic concepts such as beauty, taste, and satisfaction from above, as it were, Fechner sought to construct an experimental science of aesthetics from below. In France, Fechner's book was read as an emboldened defense of psychophysics' scope, extending as far as qualitative determinations. Fechner applied the psychophysical principle of measurement to hedonic and aesthetic judgments involving three types of experiments: he documented subjects' choice of which artworks among a range of options they found to be the most pleasurable; he also asked subjects to make art objects that they found to be either the most pleasurable or the least pleasurable; and finally, he compiled statistics of the forms of beauty most often employed in works of art. The final method led Fechner to posit what he called the "golden rule" of

⁵² Jules Tannery, *La Revue scientifique*, 4, no. 43 (1875): 15.

proportionality.⁵³ Beginning with subjects' judgments of the most pleasing proportion of sides in a rectangle, Fechner built up the golden rule to a principle he thought to be evident in the body shapes of human figures depicted in the tableaux of catalogues from European art museums. When figures' torsos were too long, or their legs too short, for example, Fechner thought that they failed to instantiate the golden rule. He claimed to discover a "divine" proportionality that rendered the artworks employing it to be universally pleasurable. Unlike his early work, which analyzed the gradations of sensations, Fechner's experimental aesthetics measured the sensory extremes – the most and least pleasurable.

Émile Boutroux and Creative Nature

Émile Boutroux's work was decisive in forging the conceptual bond that Jules Tannery articulated between the qualitative and heterogeneous nature of consciousness. For Boutroux, the stakes of the two concepts – quality and heterogeneity – turned on the foundation they provided for human freedom. The qualitative and heterogeneous dimensions of consciousness constitute the creative domain of human experience that cannot be predicted in advance. Against Fechner, nothing in the sensory excitation of an object can determine whether I find the object to be beautiful. My qualitative experience of the object, and comparison between it and others on the basis of a heterogeneous standard, constitute, according to Boutroux, an irreducibly free act.

⁵³ For an intensive discussion of Fechner's aesthetics, see: Fernando Vidal, "La Neuroesthétique, un esthétisme scientiste," *Revue d'Histoire des Sciences Humaines* 2, no. 25 (2011): 239-264.

Boutroux's correspondence with Jules Tannery about the psychophysics played a formative role in preparing *De la contingence des lois de la nature*, which I discussed in the second chapter. Boutroux and Tannery were students together at the École normale from 1865 to 1868. It was there where Tannery, Boutroux reflected, "was interested, with his open spirit, to my efforts to understand his scientific reasoning. Penetrating his soul, mixing my ideas with his was one of the most profound joys he had given me to taste."⁵⁴ After the Franco-Prussian war cut his studies short in Heidelberg, Boutroux taught philosophy at a *lycée* in Caen in 1871. He was reunited with Jules, who took a mathematics professorship there, and Boutroux soon became a fixture in the Tannery family. Paul had recently completed an engineering degree at the École polytechnique and was on course to pursue a double career in the state-run tobacco industry and in historical scholarship. Paul eventually taught a free course at the Sorbonne in 1884-5, but he never took an official professorship as Jules had.

Mary Joe Nye has closely documented the relationships among Boutroux, the Tannery brothers, and the mathematicians Benjamin Baillaud and Henri Poincaré, which constituted what she calls the "Boutroux circle."⁵⁵ At its heart, the group was committed to conventionalism, the idea that scientific models are not true and false, in the sense that they correspond or not to reality, but are instead convenient tools to explain natural processes. Less attention, however, has been given to the young Boutroux's relation to Paul Tannery. Boutroux's archive at the Institut de France contains the letters of their rich correspondence that transpired between 1872 and 1874. Therein the two discussed the

⁵⁴ Émile Boutroux, *Jules Tannery 1848-1910*, manuscript found in Boutroux's papers at the École normale supérieure, Paris.

⁵⁵ Mary Jo Nye, "The Boutroux Circle and Poincaré's Conventionalism," *Journal of the History of Ideas* 40, no. 1 (1979): 107-120.

ideas that shaped the distinction between quantity and quality, and brought them to bear on their mutual critiques of psychophysics.

To kick off the correspondence, Paul counseled Boutroux to read Auguste Comte's first treatise on positive philosophy, which posed the question that would become central to Boutroux's thesis: whether the laws of nature are determined absolutely or only in a certain measure. It is surprising that Boutroux would not have already read Comte, who was still one of the most dominant thinkers in France. The Comtian hierarchy of knowledge organized the sciences according to their dependence on each other. Mathematics was the most basic, followed by astronomy, physics, chemistry, biology, and sociology. Ascending the hierarchy, each science became progressively more concrete and pertinent to a science of man. Descending the hierarchy, each science became more abstract, supplying the laws on which the higher sciences depend. Tannery identified a critical point separating the sciences into two kinds: those that depend primarily on quantities, and those that depend on qualities. Mathematics, physics, and chemistry, those sciences at the base of the hierarchy, strictly make use of quantities to determine their objects in law-like fashion. "This truth," Tannery wrote, "seems to become a contrary paradox if it is applied to biology or to the social sciences"⁵⁶ – those sciences near the top of the Comtian hierarchy, which depend on qualitative variety. Yet, Tannery suggested, the metaphysical distinction between quantity and quality is not absolute. All quantities presuppose qualities. As Boutroux clarified in his thesis, quantity "acquires signification only as a limit, a point of intersection; and all limit presupposes a

⁵⁶ Paul Tannery, letter to Émile Boutroux, Oct. 29 1872, MS 4122.2, Correspondance d'Émile Boutroux, Institut de France.

thing that is limited.”⁵⁷ There must exist unity, a homogenous order, beneath the different quantities measured. Optimistic in the future of science, Tannery added, “To the extent that science progresses, we’ll see the appearance of new unities which will allows us to evaluate quantities that were previously considered as qualities.”⁵⁸

Comte’s rational classification of the sciences informed the conceptual architecture of *De la contingence des lois de la nature*. For Comte as for Boutroux, each level of science is irreducible to the levels beneath it. Biology makes use of certain mathematical principles, for example, but it cannot be explained on the basis of mathematics alone. Boutroux reconceived Comte’s classification in two ways. First, Boutroux posited an ontological hierarchy structuring the multiple domains in which nature manifests itself. This began with being, and proceeded to advance through genera, matter, bodies, living beings, and finally, man. Second, much like Comte, Boutroux positioned philosophy atop the hierarchy. But while Comte treated philosophy as the synthesis of the sciences, and therefore as a domain ultimately reducible to the hierarchy of sciences, Boutroux conceived philosophy as leaping beyond the sciences. Philosophy’s role, he argued, is to articulate the final purposes to which the mechanistic order of nature is subservient. These architectural features marked the limit of Comte’s influence, by way of Tannery, on Boutroux’s thesis. The problem to which Boutroux addressed his classification of nature was distinct: what role does contingency play in each domain of nature, and in turn, to what extent does each science depend on contingency? At one end, mathematics reigns in contingency to its minimal degree since the laws of mathematics are identical to, and thus absolutely determine, the objects of mathematics. On the other

⁵⁷ Émile Boutroux, *The Contingency of the Laws of Nature*, trans. Fred Rothwell (Chicago: Open Court, 1911), 30.

⁵⁸ Paul Tannery, letter to Émile Boutroux, Oct. 29 1872.

end, the human sciences integrate the most contingency, since human creativity outstrips the laws of psychology and sociology.

Boutroux's correspondence with Tannery reveals that the two thought about the problem of contingency in terms of the interplay between the quantitative and qualitative dimensions of the natural sciences. In a letter to Tannery, Boutroux outlined his dissertation in two parts: the first dedicated to quantity, the second to quality. A given science makes use of quantitative definitions in order to invariably determine the laws with which it measures phenomena. "I would like to determine the species of quantity of which each science studies the permanence. There would be the formula of kinetic energy (mv^2), weight, etc."⁵⁹ Acknowledging his scientific inadequacies, Boutroux asked Tannery, "You could without a doubt give me the formulas responding to my question."⁶⁰ By isolating the quantitative dimension of each science, Boutroux could ascertain just how deterministic it is. Yet, even at the heart of its determinism, quantity evinces a dimension of contingency:

Generally what remains is the possibility of there being *different* uses for a given quantity while holding onto the permanence of the amount. For example, the antecedent 4 works equally well as a consequent of $2+2$ or $1+3$. I would like to find something analogous to the example in all of the sciences. This chain of several solutions, equally possible and legitimate from the scientific point of view, would be an element of chance contained in nature, studied with just the illumination of the understanding.⁶¹

The second part of Boutroux's outline considered quality, and the role it plays in contingency. Human creativity was for Boutroux the prototype for contingency. "In assigning it an appropriate place in the object of each science we could explain what in

⁵⁹ Émile Boutroux, letter to Paul Tannery, 26 Apr. 1873, MS 4122.2, Correspondance d'Émile Boutroux, Institut de France.

⁶⁰ Ibid.

⁶¹ Ibid.

each of these objects would remain unexplained.”⁶² Contingency, Boutroux conveyed, is not only the key to the “moral sciences,” it also inheres in the laws governing the natural sciences. Since scientific laws are human creations, even the laws of the inanimate realm retain an element of human freedom, “an ideal (platonian) of good, a perfect form for studying all of [the law’s] degrees.”⁶³

The partition that Boutroux sketched along the lines of quantitative and qualitative sciences helped to guide the organization of his thesis. Quantity and quality served as the base and peak respectively of the ontological hierarchy. At the base, mathematics studies the purest dimension of quantities; at the peak, philosophy studies qualities. Boutroux would spend the rest of 1873 graduating the mixtures of each that constitute the intermediary stages.

Tannery commended Boutroux’s distinction between quantity and quality. He added that its conceptual payoff could be reaped if brought to bear on recent psychophysical experiments. Tannery pushed Boutroux to consider how the distinction might help to compare natural phenomena according to their internal and external aspects. At stake was how to compare different sensations: “We know that hunger can be greater or lesser, and from there we represent it as an intensive quantum that could theoretically be measured absolutely like heat or light. But that is nothing. In effect, one can’t feel a hunger in one given moment, and one can’t compare with oneself the sensations of two different hungers.”⁶⁴ Tannery’s point was that hunger can be measured in a variety of objective ways: according to the dilation of the stomach, or according to

⁶² Ibid.

⁶³ Ibid.

⁶⁴ Jules Tannery, letter to Émile Boutroux, Apr. 1783, MS 4122.2, Correspondance d’Émile Boutroux, Institut de France.

the amount of gastric acid. Yet the subjective aspect of the sensation escapes quantification because different states of hunger are qualitatively distinct. Tannery effectively applied Boutroux's insight into the nature of quality to the problem on which his brother's engagement with psychophysics would turn. As long as there is a comparison between natural phenomena that are qualitatively different nature, there is no standard to determine equal units for comparison. This amounts to what Tannery, alongside Boutroux, called the heterogeneous nature of qualitative comparisons.

Jules Tannery, however, identified a more nuanced reason why qualitative phenomena are heterogeneous. He wrote to Boutroux that there is a form of causality peculiar to qualitative phenomena: "For nothing can prove that all the anterior phenomena, in two different cases, would neither be the same as the sensation felt by the subject, nor that the consequences that follow would be the same."⁶⁵ Here Tannery intimated that there is not just a unique manner of comparing different qualitative phenomena, but there is also a kind of causality peculiar to qualitative phenomena. The idea might seem strange, since contingency is typically thought to be what falls outside of causal models, and is therefore inexplicable. Yet, consistent with the scientific spiritualist project of articulating a logic appropriate to freedom, Tannery asserted that contingency reigns where natural processes undergo a qualitative transformation, such as when sugar is dissolved into water. Although the amount of sugar stirred into water determines its final degree of saturation, the process of dissolution, by which one stirs the sugar in a glass of water, involves a series of random movements by sugar granules. What Boutroux took from Tannery was the idea that the science of nature can only arrive at quantitative

⁶⁵ Ibid.

determinations by abstracting from the qualitative, and thus contingent, processes taking place:

To consider quantity with relation to a homogenous quality, or to leave quality altogether out of account, is to place oneself outside the conditions of reality itself. Everything that possesses qualities, and consequently participates in that radical indetermination and variability which belong to the essence of quality. Thus, the principle of the absolute permanence of quantity does not apply exactly to real things: these latter have of substratum of life and change, which never becomes exhausted. The singular certainty presented by mathematics as an abstract science does not authorize us to look upon mathematical abstractions themselves, in their rigid monotonous form, as the exact image of reality.⁶⁶

De la contingence pushed the principle of contingency to its extreme in the final chapter on psychology. Heterogeneity is greatest between psychic events, Boutroux contended, since consciousness evinces the highest degree of freedom that exists in the natural world. “A psychological consequent never finds in the antecedent its complete cause and all-sufficing reason.”⁶⁷ Boutroux reproached experimental psychologists who transported the law of conservation, either knowingly or not, into the conscious domain of freedom. At worst, the reduction of consciousness to purely physiological causes would ensue; at best, experimental psychology would treat antecedent psychic conditions as determinate: “Even in the moral order of life, beneath changing externals, there are strata ever more and more solid. Beneath the disposition of the moment is individual character; beneath individual character are the manners and customs of the time; then follows national character, and, finally, human nature itself.”⁶⁸ What experimental psychology neglected, according to Boutroux, was the potential for humans to resist their

⁶⁶ Émile Boutroux, *The Contingency of the Laws of Nature*, 68.

⁶⁷ Ibid., 123.

⁶⁸ Ibid., 121; 138.

personal habits, cultural mores, social laws, and even for human “nature” to undergo radical change.

Although Boutroux never referenced Fechner, Weber, or any of psychophysicists explicitly in *De la contingence*, he was certainly familiar with their work. Boutroux had read Ribot’s books, and even suggested to a philosophy student that he write a dissertation on “The experimental method and its application to psychology.”⁶⁹ It was not until 1892 that Boutroux directly critiqued psychophysics in a lecture course at the Sorbonne. “Scientific concepts, intelligible as a measure of reality, will lose all meaning if we insist on the measure finally measuring nothing but itself.” For Boutroux, psychophysics “shall thus land ourselves in nihilism,” unless measurement leaves room for a qualitative dimension of consciousness, “and with it the possibility of a spiritualistic metaphysics.”⁷⁰

Bergson’s Critique of Psychophysics

Fifteen years after the publication of Boutroux’s *De la contingence*, Bergson drew on its account of qualitative heterogeneity, and above all, the causal model it entailed, in his critique of psychophysics in *Essai sur les données immédiates de la conscience*. Bergson explicitly referenced Jules Tannery’s indictment of Fechner’s science of

⁶⁹ Émile Boutroux, letter to Henri Lachelier, 29 June 1879, MS 18742, Fonds Henri Lachelier, Bibliothèque nationale de France.

⁷⁰ Émile Boutroux, *Natural Law in Science and Philosophy*, trans. Fred Rothwell (New York: Macmillan, 1914), 185, originally published as *De l’idée de loi naturelle dans la science et la philosophie contemporaines* (Paris: Félix Alcan, 1895).

measuring sensations.⁷¹ As one philosopher commented, “In the *Essai* ... what appeared completely new for the era was not the critique of Fechner’s theory of intensity, since we had all read Tannery; it was his conception of duration [*durée*]: for we had all relied on Kant, and on the *a priori* forms of the sensibility.”⁷² In fact, Bergson’s concept of duration drew heavily on Boutroux’s concept of quality. But Boutroux’s influence went unacknowledged.⁷³ His absence is all the more surprising in light of the fact that Bergson was Boutroux’s student at the École normale. “Boutroux had the reputation of not admitting that philosophy could have a point of departure other than Kantianism,”⁷⁴ Bergson shared in an interview. But after taking his course a second year, Bergson later recognized the value of Boutroux’s method: “For this grand adversary of “scientism” actually respected science more than anyone else.”⁷⁵ In fact, Boutroux encouraged his philosophy students to pursue studies in another positive science.

Bergson’s *Essai* apportioned quantity and quality respectively to what he called the temporal and spatial dimensions of conscious experience. The example of two different ways of analyzing movement is illustrative. According to the spatial dimension, a motor activity such as running can be analyzed in terms of the space traversed.⁷⁶ Say a runner completes 5 kilometers in thirty minutes, making for an average speed of 10 kilometers per hour. In order to arrive at the figure, we of course divide the number of

⁷¹ Henri Bergson, *Time and Free Will: An Essay on the Immediate Data of Consciousness* 3rd. ed., trans. F.L. Pogson (London: George Allen & Co, 1913), 67, originally published as *Essai sur les données immédiates de la conscience* (Paris: Félix Alcan, 1889).

⁷² Jacques Chevalier citing Raymond Thamin in *Entretiens avec Bergson* (Paris: Plon, 1959), 78

⁷³ Laurent Fedi documents the unacknowledged influence of Boutroux on Bergson’s first book in “Bergson et Boutroux, la critique du modèle physicaliste et des lois de conservation en psychologie,” *Revue de métaphysique et de morale* 2, no. 30 (2001): 97-118.

⁷⁴ “Entretien avec Bergson,” MS 4122.7, Notes et correspondance d’Emile Boutroux, Institut de France.

⁷⁵ Dominique Parodi, *Du positivisme à l’idéalisme* Vol. 2 (Paris: J. Vrin, 1930), 139. The sixth chapter, “Émile Boutroux,” synthesizes the notes from interviews that Parodi bequeathed to Boutroux’s archive at the Institut de France.

⁷⁶ Bergson employs several examples of movement in the *Essai*. I am using that of running to reconstruct the argument of chapter 2.

kilometers traversed by the number of hours elapsed. The example is analogous to Fechner's measurement of sensations. Both, Bergson claims, presupposes a spatial representation. Each step of the runner's path is imagined as laid out along a line. It is the total points along the line, measured uniformly in units of kilometers, that allows consciousness to compute the average speed. According to Bergson, treating the runner's movement as if it unfolds in an extensive space separates the movement into homogeneous parts. It is a mode of representation in which the natural sciences feel at home, since each part can be measured from an observable, third-person perspective.

The mode of representing the runner's movement becomes quite different when considered according to the temporal dimension of consciousness. The entire process, from the initial burst of energy she exerts through the fatigue and ultimately exhaustion she endures when crossing the finish, constitutes a single unified experience. Understood from the first-person perspective of the runner, her movement is not yet decomposed into discrete parts and arranged linearly. It is a seamless endeavor, what Bergson called a lived duration. Now, despite being a unified process, there are nonetheless parts of the runner's movement. She feels differently throughout, occasionally finding a mindless stride, and sometimes laboring to find the energy to continue. These sensations are different, but, when experienced as a lived duration, they are not different in the same way that the units composing the spatial representation of movement are different. When endured temporally, each sensation is perceived as a different quality, and the difference between them is heterogeneous. The difference between a casual stride and a furious exertion reflects a difference in nature. They admit no common measure; there is only the uninterrupted transition that bleeds from one singular sensation to the other. For Bergson,

this is the irreducibly qualitative dimension of sensations that philosophical introspection reveals.

“We find it extraordinarily difficult to think of duration in its original purity,” Bergson wrote, “this is due, no doubt, to the fact that we do not *endure* alone; external objects, it seems, *endure* as we do, and time, regarded from this point of view, has every appearance of a homogeneous medium.”⁷⁷ Bergson charged that Fechner unduly measured sensations by adopting a model of perception borrowed from that used by physics to measure the movement of material objects in space. But Bergson did not settle by arguing that Fechner was wrong. Bergson’s argument was that psychophysics’ distortion of the lived duration of consciousness followed from the illusion that consciousness ineluctably engenders by itself. Fechner fell victim to the natural tendency of consciousness to represent its activity as if it took place in a homogeneous medium. It is precisely this spatial representation of sensations, Bergson argued, which permitted Fechner to decompose them into discrete units that admit an equal measure. According to Bergson, there is nothing wrong with the quantification of sensation *per se*. Bergson pursued his philosophy degree only after switching from mathematics. By all accounts, he was a brilliant mathematician.⁷⁸ But quantity is best suited, Bergson suggested, to measure material objects in the external world. Quantity proves adulterating, however, when applied to inner psychical processes. Fechner’s hubris was to think that a quantitative logic of homogeneity could grasp the temporal dimension of sensations, while Bergson’s correction was to demonstrate that sensations, because they belong to

⁷⁷ Henri Bergson, *Time and Free Will*, 106-107.

⁷⁸ See Philippe Soulez and Frédéric Worms, *Bergson* (Paris: Presses universitaires de France, 2002).

the lived duration of consciousness, obey an entirely distinct qualitative logic of heterogeneity.

Psychophysics served as a conceptual springboard for Bergson's project in the *Essai*. Limiting the application of Fechner's law to the spatial dimension of sensations and diagnosing the logic on which it depends allowed Bergson to reveal the temporal aspect of sensation as they experienced immediately. Bergson's positive task was to articulate just what this qualitative logic suited to the temporal dimension of consciousness consists of.⁷⁹

Now the purpose of either logic is to compare sensations. Both Fechner and Bergson acknowledged there are differences in sensations. The distinguishing feature of their respective logics, I am suggesting, turns on what counts as a difference. The logics hinge, as Bergson saw the problem, on two forms of multiplicity. The form of multiplicity suited to the spatial dimension is extensive. The multiple degrees of a sensation's magnitude, like the kilometer markers on a race course, are externally opposed to each other; they are static, and analyzable, as it were, side by side so that an observer can conveniently compare the difference in magnitude at two distinct points in time. Bergson called this "discrete multiplicity."

Conversely, the form of multiplicity suited to the temporal dimension is intensive. Sensations cannot be compared side by side without neglecting an essential feature of their intensive character – namely, the retention of the past sensation in the present sensation.⁸⁰ The runner perceives the retention of past sensations in the feeling of transition from one state to another. Slowing down, for example, is coupled with relief

⁷⁹ Bergson, *Time and Free Will*, 73.

⁸⁰ *Ibid.*, 104-106.

after having gone fast. Consciousness ascertains the difference between such singular sensations by describing the passage from one to the other. Bergson calls this “qualitative multiplicity”:

We should therefore distinguish two forms of multiplicity, two very different ways of regarding duration, two aspects of conscious life. Below homogeneous duration, which is the extensive symbol of true duration, a close psychological analysis distinguishes a duration whose heterogeneous moments permeate one another; below the numerical multiplicity of conscious states, a qualitative multiplicity; below the self with well-defined states, a self in which *succeeding each other* means *melting into one another* and forming an organic whole.⁸¹

Different kinds of multiplicity – discrete and qualitative – structured the respective logics that Bergson allocated to the spatial and temporal dimensions of consciousness. And it is qualitative multiplicities which constitute what Bergson called the “immediate data of consciousness.” By identifying qualitative experiences as the most basic elements of consciousness, Bergson was explicitly critiquing Ribot’s claim to identify discrete multiplicities that could be measured as the “facts of consciousness.”⁸²

The positive part of Bergson’s project was not complete until he could demonstrate how the spatial and temporal dimensions mutually relate to each other. This relation is at first glance paradoxical. On the one hand, Bergson posited the temporal dimension of sensations as more basic than their spatial dimension. Consciousness follows a tendency to represent sensations in discrete terms in order to render them easier to communicate. Consciousness subdues the immediate intensity of sensations by extracting them from the qualitative fabric in which they interpenetrate. What results is a compartmentalized, more socially manageable, but derivative mode of representing sensations. On the other hand, Bergson made clear that consciousness can analyze

⁸¹ Ibid., 128.

⁸² See Théodule Ribot, “De la durée des actes psychiques d’après des travaux récents,” 267-88.

sensations in their qualitative dimension only by resisting this very tendency. A heightened concentration and inner reflection is required to restore sensations to their immediate context of bleeding seamlessly into each other.⁸³ The paradox is that, for Bergson, consciousness must surpass the spatial domain of the natural sciences in order to arrive at the temporal domain, which, as he characterized it in the above passage, serves as its foundation. In other words, metaphysical analysis can reveal the conditions of psychophysics only by taking experimental results as a point of departure.

Bergson's critique of psychophysics was exemplary of scientific spiritualists' engagement with experimental psychology. The negative task of the *Essai* consisted of delimiting the dimension of experience to which psychophysical research applied – namely, external observation – and identifying the logic on which it depended – quantity. The positive task consisted of carving out a distinct dimension of experience that resists quantification – namely, the immediate data of consciousness – and constructing an alternative qualitative logic appropriate to it. Bergson was not alone in advancing a critique of psychophysics in these terms. Indeed, the ideas of quality and quantity, as well as of contingency and heterogeneity, as I have argued, all gained a distinctly spiritualist currency during the fifteen years preceding the 1889 publication of the *Essai*.

⁸³ It has been debated in Bergson scholarship whether lived duration is seamless or separable. Most famously, Gaston Bachelard critiqued Bergson's concept of duration on the grounds that it forecloses the possibility of analyzing the instants constitutive of time. See *L'Intuition de l'instant* (Paris: Félix Alcan, 1932). It is not my intention to resolve this debate. Let me simply suggest that lived duration has a porous quality that is legibly distinct from the spatial representation of time, understood as a succession of immobile units.

Alfred Fouillée, the Unconscious, and *Appétition*

Psychophysics broached the further problem of whether there is an unconscious dimension of sensation. Fechner's concept of the just-noticeable difference entailed that slight differences in the level of excitation go unnoticed; they are not strong enough to be distinctly perceived. This accounts, as I have already shown, for the basic discrepancy that allowed Fechner to posit an algorithmic relationship between excitation and sensation. Sensation grows more slowly in intensity, by leaps as it were, than nervous excitation, which grows continuously. At stake in the reception of Fechner's law was how to explain these "blind spots" of consciousness. What kind of mental activity takes place between each just-noticeable difference, that is, during the gradual increase in the strength of a stimulus? And if changes in stimulation do in fact go unnoticed, then can psychophysics demarcate the limits of consciousness?

According to Fechner, psychic phenomena that cannot be immediately apprehended are unconscious.⁸⁴ Today, the term's connotation is psychoanalytic, owing to what Marcel Gauchet calls "the anti-historical illusion that has trapped us in the psychoanalytical movement, strangely convinced of its auto-generation."⁸⁵ Before Freud, Gauchet insists, "the privilege of consciousness was fundamentally shaken by the notable gains and models proposed by neurophysiology."⁸⁶ The neurophysiological underpinning of Fechner's model of the unconscious operated, first, below the register of the perceived sensations, which he believed to constitute the basic givens of consciousness; second,

⁸⁴ For a probing discussion of Fechner's theory of the unconscious see David Romans, "Fechner as a pioneering theorist of unconscious cognition," *Consciousness and Cognition* 21, no. 1 (2012): 562-572.

⁸⁵ Marcel Gauchet, *L'inconscient cérébral* (Paris: Éditions du Seuil, 1992), 14.

⁸⁶ *Ibid.*, 32.

autonomously, such that sensations follow distinct laws of the unconscious, which can be analyzed apart from yet parallel to the laws of conscious phenomena. But Fechner's model of the unconscious was modest. He claimed that the contents of the unconscious, those sensations passing between just-noticeable differences, are *not yet* consciousness. The just-noticeable difference therefore corresponds to the point at which consciousness retroactively perceives the build-up of unconscious sensations.

Ribot, however, found in Fechner's law a more radical model of the unconscious. Unconscious phenomena, according to Ribot, constitute physiological data that *resist* conscious apprehension. Ribot's model had the effect of eliminating philosophical analysis from experimental psychology: introspection can reveal conscious phenomena, but unconscious phenomena are the purview of experimentation. The unconscious was instrumental to Ribot's legitimation of the new psychology. For Ribot, the psychologist's task, like that of the natural scientist, is to uncover the laws of the unconscious. Ribot drew his aspiration from Wundt, for whom "consciousness only knows the results of the work operative in the obscure laboratory situated beneath itself; the unconscious is the theatre of the most important spiritual phenomena: everywhere consciousness supposes the unconscious as its condition."⁸⁷ By depicting the unconscious as the theatre of "spiritual phenomena," Ribot recruited Wundt as a critic of spiritualism. Ribot emphasized, "the traditional opinion which holds that consciousness is a stage embracing all our *inner* life is unacceptable."⁸⁸ Spiritualist metaphysics, Ribot inveighed, could penetrate inner experience only until it struck the physiological bedrock of the unconscious, at which point inner reflection must give way to experimental observation.

⁸⁷ Théodule Ribot, *La psychologie allemande contemporaine* (Paris: Librairie Germer Baillière, 1879), 223.

⁸⁸ *Ibid.*

Alfred Fouillée's (1838-1912) engagement with psychophysics took issue with the dividing line along which Ribot cut the unconscious from consciousness. "It is important to avoid a confusion here that vitiates nearly all of the contemporary psychology," Fouillée wrote in an 1883 article, "namely, the confusion between an indistinct consciousness and an entire unconscious."⁸⁹ Fouillée's argument was that slight differences in excitation might be difficult to notice, but that does not make them unconscious. Fouillée did not dispute the truth of Fechner's law. He took issue with how experimental psychologists such as Ribot extrapolated it to support a narrow picture of consciousness. This picture took consciousness to be a faculty of judgment. Consciousness executes a judgment when it subjects particular concepts to general laws. The fact that sensations fall outside this myopic picture of consciousness, Fouillée argued, does not lend good reason to countenance the claim that sensations are unconscious. By enlarging the realm of the unconscious to include physiological processes, Ribot and others, Fouillée charged, erroneously shrank the realm of consciousness. Fouillée not only reproached this picture for rigidifying concepts as exclusively intellectual and freezing consciousness into a static faculty. The new psychology, Fouillée diagnosed, had unwittingly molded the unconscious into the old spiritualist frame: "Life, sensibility, even consciousness is not a single and indivisible thing as imagined by the traditional spiritualism: it is susceptible not only to multiple directions, but diffusion, concentration, transmission, and displacement."⁹⁰ Fouillée took as his positive task to draw on experimental psychology in order to articulate a dynamic

⁸⁹ Alfred Fouillée, "La Vie consciente et la vie inconsciente d'après la nouvelle psychologie," *Revue des Deux Mondes* T. 59 (1883): 888.

⁹⁰ *Ibid.*, 904.

framework for consciousness stretching from the murky affective depths to the most clear and distinct mathematical analyses.

The *idée-force* was Fouillée's key concept that expressed the dynamic nature of consciousness. It first appeared in Fouillée's programmatic essay that sought to reconcile Ribot's materialist psychology and Ravaisson's spiritualism without leaning exclusively on either.⁹¹ The "*motor* power of the *idea*," Fouillée posited, is the "middle term between the two." Ideas have a natural propensity to act on the world. As Fouillée's few commentators have noted, his concept of *idées-forces* grounded consciousness on the sensory-motor paradigm: ideas follow the centripetal impulsion inward (sensory reception) from an external world and direct their centrifugal impulsion outward (motor response) toward action on the external world.⁹²

Where Fouillée departed from physiology, and his metaphysical commitment intervened, was in the ethical motivation of his account. Ideas are not reducible, Fouillée claimed, to the determinism into which mechanistic explanations lapse. The dualism between intellectual representation and sensory reception reflects two dimensions of the will's effort. Thinking, that is, presupposes freedom. In his first compilation of works dedicated to a systematic theory of *idées-forces*, Fouillée explicitly drew on Maine de Biran's insight: "sensing or suffering [*pâtir*] already presuppose *acting*."⁹³ Intellectual concepts are equally forms of action beyond their capacity to represent facts since, Fouillée held, ideas encounter resistance in each other and, moreover, manifest a creative

⁹¹ Alfred Fouillée, "La philosophie des idées-forces: comme conciliation du naturalisme et de l'idéalisme," *Revue philosophique* T. 8 (1879): 7.

⁹² See Annamaria Contini, "L'intelligence créatrice. Puissance et volonté de conscience dans la philosophie d'Alfred Fouillée," *Corpus* 53 (2008): 33-64.

⁹³ Alfred Fouillée, *L'évolutionnisme des idées-forces* (Paris: Félix Alcan, 1890), 85.

power to conceive the world anew. Freedom, understood as embodied motility, was thus the pivot point for Fouillée's account of consciousness.

In place of the dualism that experimental psychologists erected between the conscious and the unconscious, Fouillée argued that there is instead a dualism internal to consciousness: "a consciousness purely sensible, which can be confused, and an intellectual consciousness, which is necessarily comparative, differentiated and contrasted."⁹⁴ The spectrum of forms that concepts assume ascend toward discrete and abstract representations and descend into the amalgam of sensory states akin to the stream of the passing meanwhile. Fouillée characterized the kinds of concepts respectively as representative (or reflexive) and immediate.

At stake, again, was the status of the immediate data of consciousness. For Fouillée, the immediate data consist of non-reflected sensations. Consciousness can submit even the most transient sensations to a heightened level of reflection; and when it does, the results resemble those of psychophysics – namely, discrete, clearly distinguished sensations which can be measured. "At its origin, the living being does not need this entire apparatus; it suffers and it enjoys, and when it enjoys, and above all when it suffers, it does not need to search for a tool for contrasting, for being warned and feeling. It has an immediate rapport with itself; it has a spontaneous consciousness."⁹⁵ The implication was that psychophysics generally, and Ribot's interpretation in particular, was built on a derivative concept of sensations, abstracted from their immediate, incoherent state within consciousness. Sensations are no less conscious, Fouillée claimed, for not appearing distinct.

⁹⁴ Alfred Fouillée, "*La Vie consciente et la vie inconsciente d'après la nouvelle psychologie*," 889.

⁹⁵ *Ibid.*, 890.

Fouillée drew on Maine de Biran's principle: wherever there is sensation, consciousness follows. Fouillée believed it was critical that all sensations retain at least an inchoate conscious dimension because conscious phenomena cannot be built up from unconscious phenomena. Just as stasis cannot produce movement, the unconscious cannot produce consciousness. Following Leibnitz's distinction between perception and apperception, the distinctions between conscious states turn on their degrees of clarity, as much as the distinctions between movements turn on their degree of momentum. Purely physiological phenomena lack the power to spontaneously engender psychic phenomena. Fouillée reproached Ribot's model of the unconscious for having ossified what Fouillée took to be the plastic *passage* between the multiple dimensions of consciousness.

Fouillée construed his philosophical method as conciliatory. Beginning with his 1872 *La liberté et la déterminisme*, he conceived the task of philosophy as reconciling the great systems. Fouillée contrasted conciliation, which he treated as speculative and theoretical, with Cousin's eclecticism, which he saw as historical and critical. Whereas Cousin employed common sense to select the best philosophical ideas and leave the rest in the past, Fouillée took as his task to reconcile competing ideas. Among scientific spiritualists, Ribot admired Fouillée as "the most brilliant mind," who "like the rest of his school, fully accepts the data of science on condition of subordinating them to the moral point of view, which contains the true ground of things."⁹⁶

Fouillée's decisive contribution to the development of scientific spiritualism was his idea that the division between the domains of experience is cut from *within* consciousness. Part of the very activity of *idées-forces* is to envelop two dimensions of consciousness. The first is intellectual. The second is what Fouillée called appetitive.

⁹⁶ Théodule Ribot, "Philosophy in France," 372.

Appétition is the principle that, as one commentator summarizes, “pushes a living being toward action in view of the satisfaction of a need or a desire or the realization of an end.”⁹⁷ The term conjures similarities with Spinoza’s *conatus*; but Fouillée explicitly expressed his debt to Darwin’s notion of competition for life.⁹⁸ *Appétition* and intellection correspond to two dimensions of consciousness: “they are not two disparate realities that could be indifferent to one another, nor two “aspects” of which one, the mental, would be the epiphenomenon of a phenomenon; rather it is *the same reality* in the process of development that divides itself by the diversity of means to seize it.”⁹⁹

Psychophysics represented sensations as if they occupied the intellectual dimension of consciousness, but, Fouillée argued, the field neglected the appetitive dimension. Psychophysics treated sensations as discrete and separable representations, reflectively perceived by a subject. Intellectual representations, however, only reflect the superficial crust of consciousness. “The appetitive action that constitutes life and the will,” Fouillée contrasted, “is constant, without actual intermittences.”¹⁰⁰ It was this dualism within consciousness, which, according to Fouillée, accounted for the “blind spots” in Fechner’s experiments. The activity passing between just-noticeable differences inheres in the appetitive dimensions of consciousness, which Fechner had occluded by relying on a narrowly intellectual picture of consciousness. Psychophysics was thus methodologically unable to account for *appétition* because, Fouillée held, only metaphysical analysis is uniquely disposed to capture the appetitive dimension of

⁹⁷ Annamaria Contini, “L’intelligence créatrice. Puissance et volonté de conscience dans la philosophie d’Alfred Fouillée,” 40.

⁹⁸ Alfred Fouillée, *L’évolutionnisme des idées-forces*, liv.

⁹⁹ *Ibid.*, lix.

¹⁰⁰ *Ibid.*

consciousness. In line with the project of scientific spiritualism, *appétition* contributed to a conceptual vocabulary a logic appropriate to inner reflection.

The difficulty that Fouillée confronted was that *appétition* carried too much physiological baggage into philosophy. William James criticized the concept on precisely these grounds. “the almost exclusively psychological point of view from which it is carried on, and the absence from it of any fundamentally original concepts keep it from effectually ‘laying’ all that more properly philosophical dust which it so well succeeds in stirring up.”¹⁰¹ Fouillée did position himself as an outlier within the French spiritualist landscape. In the eyes of many, he did not open psychology onto metaphysics enough.

Nonetheless, the dualism that Fouillée conceived between *appétition* and intellection was of a piece with the dualism that Bergson posited between the temporal and spatial dimensions of consciousness in the *Essai*. In fact, Fouillée would describe his project in uncannily Bergsonian terms: intellectual consciousness “divides the indivisible, renders homogeneous the heterogeneous, immobilizes the mobile, and renders static the dynamic.”¹⁰² Fouillée and Bergson fashioned their respective dualisms to trace the dimensions of consciousness with which scientific observation and inner reflection accord. They therefore deepened the project of scientific spiritualism, which, I hope to have shown, articulated a conceptual vocabulary to explain the free activity of consciousness in terms rigorous enough to rival the associationist and mechanist logics of experimental psychology.

¹⁰¹ William James, “La Psychologie des Idées-Forces. by Alfred Fouillée,” *The Philosophical Review* 2, no. 6 (1893): 720.

¹⁰² Fouillée, “Correspondance,” *Revue de Métaphysique et de Morale*, T. 20, No. 1 (Janvier 1912), pp. 26-28. “La première connaissance [science], ai-je dit, divise l’indivis, rend homogène l’hétérogène, immobilis le mobile, rends statique le dynamique.”

Experimental psychology spurred a new generation of philosophers to revolutionize their spiritualist commitment to the autonomy of consciousness. Tannery, Boutroux, Bergson, and Fouillée belonged to an initial wave of scientific spiritualism that gained coherence, first, through the reading community established in Ribot's *Revue philosophique*, and second, around the problems of consciousness engendered by the advent of psychophysics. Far from having staged a revolt against positivism, these scientific spiritualists justified the necessity of metaphysics and the reality of free will by confronting the limits of Fechner's quantitative methods. Psychophysics thus offered scientific spiritualists both the occasion to rejuvenate the critique of associationism, and a *point d'appui* to articulate a logic of conscious activity built around the concepts of quality, heterogeneity, and contingency.

It was in the context of these debates that Bergson developed his concept of the lived *durée*, a conceptual pillar of his lifelong project to articulate the distinctly temporal structure of consciousness. As I explore in chapter four, these debates advanced further in the pages of the *Revue philosophique* around the emergent science of psychopathology.

Chapter 4: Locating Consciousness

If psychophysics legitimated the quantitative rigor of experimental psychology, then psychopathology promulgated the nascent science into the public imagination. Paris became a hub where continental audiences flocked in order to witness mental abnormalities on display: from the hysteric female patients presented by Jean-Martin Charcot in his lecture hall at the Salpêtrière Hospital beginning in 1879 to the first French psychology laboratory opened at the École pratique des hautes études in 1889. Psychopathology aimed to derive the laws of the healthy mind from the maladies of the sick mind. And Ribot dedicated ample space in his *Revue philosophique* to burgeoning psychopathological research. His focus was specifically the psychopathology of memory, which held the key to localizing the cerebral bases of consciousness. Ribot believed that the location of memories could be uncovered by identifying the brain lesions that cause amnesia, and eventually an entire map of consciousness could be charted along humans' cerebral cortices. Scientific spiritualists studied the research on aphasia, the loss of language capacities, in order to confront the promise and peril of psychopathology. Can memories occupy a place in the brain? And if so, could consciousness be found under a microscope? Psychopathology opened the possibility of reducing consciousness to the brain; and it was around this metaphysical problem that scientific spiritualists converged.

The problem spurred a number of thinkers to join the chorus of scientific spiritualism, including Victor Egger, Jean-Marie Guyau, and Pierre Janet. These thinkers' ongoing dialogue, I will argue, lent significance to Bergson's engagement with the psychopathology of memory in his second book, *Matière et mémoire* (1896). Therein

Bergson delivered the brunt of his critique to Ribot's method of reducing memory to neural networks. Bergson affirmed that the brain functions to actualize memories, but not to conserve them. The brain "is the vehicle of an *action* and not the substratum of a *knowledge*."¹ Bergson had already demonstrated his interest in psychopathology via his anonymous 1883 translation of James Sully's *Illusions: A Psychological Study*.² The British psychologist synthesized physiological and introspective psychology to arrive at the laws of perception by an analysis of hallucinations. In the subsequent decades following his initial academic work, Bergson closely followed the emerging discourses of brain localization. The problems posed by the developing science, and widened by scientific spiritualism, set the stage for Bergson to radicalize his account of the temporal structure of consciousness and freedom.

The Psychopathology of Memory

In February of 1880 Paul Broca (1824-1880) invited Théodule Ribot to join the Société d'Anthropologie. Broca founded the Société in 1859 as a haven for the incipient science of the relationship between geography and psychology.³ Broca issued the invitation the year of his death, confirming the lineage in which Ribot already set himself: carrying on the unfinished work of localizing brain functions.⁴ Broca's interest in anthropology followed from his early work as a brain surgeon. He identified lesions in

¹ Henri Bergson, *Matter and Memory*, trans. Margaret Paul and W. Scott Palmer, 8th ed. (Brooklyn: Zone Books, 2008), 74, originally published as *Matière et mémoire* (Paris: Félix Alcan, 1896).

² James Sully, *Illusions: A Psychological Study* (London: C. Kegan Paul & Co., 1881); Bergson's translation appeared as *Les illusions des sens et de l'esprit* (Paris: Germer Baillière, 1883).

³ Jean-Claude Wartelle, "La Société d'Anthropologie de Paris de 1859 à 1920," *Revue d'Histoire des Sciences Humaines* 1, no. 10 (2004): 125-171.

⁴ For the more extensive study of Broca's work see Francis Schiller, *Paul Broca: Founder of French Anthropology, Explorer of the Brain* (New York: Oxford University Press), 1992.

the left frontal lobe of the brain as the cause of amnesia. In so doing, he identified the seat of memory, what is still called “Broca’s area.” In May 1880, Ribot published his first in a series of articles in his *Revue philosophique* that he would compile the next year as *Les maladies de la mémoire* (1881). Drawing on the examples of amnesiac patients extending from Broca’s early work to the scattered cases in Hippolyte Taine’s *De L’intelligence* (1870), Ribot ushered in what has often been described as the golden decade of memory studies in France.

That decade was part of a larger wave of medical psychology, or what was called “clinical” psychology at the time. The most notable clinical psychologists in France were the Englishmen Henry Maudsley (1835-1918) and John Hughlings Jackson (1835-1911), who applied experimental procedures to the analysis of mental illness. Their goal was to discern the causes of maladies in order to deduce the laws of the healthy psyche. Ribot drew heavily on both psychologists in support of the psychopathological method that he applied to memory. Their research illuminated the dynamic processes that unfold across the past, present, and future of consciousness. In this sense, clinical study was longitudinal. It offered an alternative, though complementary, psychological angle to the neurophysiological studies of Fechner and Wundt, which analyzed short term, punctual sensations.

Psychopathology was not the only route that experimental psychologists pursued to study memory during the decade. Researchers at Wundt’s laboratory, for example, made use of Fechner’s law to conduct experiments on auditory memory in which they would play a standard tone for subjects followed by subsequent tones.⁵ Subjects would report whether the tones were similar or different from the standard tone. In turn,

⁵ K.H. Wolfe, “Untersuchungen über das Tongedächtnis,” *Philosophische Studien* 3 (1886): 534-571.

researchers would measure the rate of memory's diminution by plotting the number of correct reports as a function of the time elapsed since the standard tone was played. Similarly, Hermann Ebbinghaus conducted a series of experiments on himself in which he would arrange a series of nonsense syllables and test how well he could memorize their order.⁶ After changing the syllables in the series, Ebbinghaus measured the rate of memory retention. The two kinds of experiments analyzed the successful recollection of memories in the healthy mind. Ribot's work in psychopathology, on the other hand, analyzed the failure to recall memories in the abnormal mind.

The conceptual issue at stake that both attracted philosophical interest in abnormality and motivated psychopathological research was the problem of brain localization. Several psychologists during the period sought to identify the locations of mental phenomena in the brain.⁷ Carl Wernicke (1848-1905) propelled the scientific culture of localization forward after it was initially set in motion by Broca's studies of the damage to cortical regions causing aphasia. Whereas Broca identified the inferior frontal gyrus as the locus of language skills, Wernicke added the nearby superior temporal gyrus in 1874. Wernicke observed that damage to the area impaired aphasiacs' ability to comprehend written and spoken language, but their ability to speak remained intact. The diagnosis of receptive aphasia, or "Wernicke's aphasia," bolstered Ribot's confidence that psychopathology could some day complete the project of localizing the entire map of consciousness.

⁶ Hermann Ebbinghaus, *Memory A Contribution to Experimental Psychology*, trans. H.A. Ruger and C.E. Bussenius (New York: Teacher's College, Columbia University Press, 1913), originally published as *Über das Gedächtnis: Untersuchungen zur experimentellen Psychologie* (Leipzig: Duncker & Humblot, 1885).

⁷ In France, see Jules Bernard Luys, *Le cerveau et ses fonctions* (Paris: Germer Baillière, 1882); Georges Surbled, *Le cerveau* (Paris: Retaux-Bray, 1890); In Britain see David Ferrier, *The Functions of the Brain* (London: Smith, Elder & Co., 1876); H. Charlton Bastian, *The Brain as an Organ of the Mind* (New York: Appleton, 1880).

Aphasia was one of two kinds of amnesia that Ribot studied. The first was general amnesia, or nearly complete memory loss. The second kind was partial amnesia. Among partial amnesiacs only certain memories are lost, typically the most recently acquired and thus least stable forms. Today general amnesia is divided into two types. Retrograde amnesia is tied to the suspension of memories of events that took place before the onset of amnesia; and anterograde is tied to the inability to create new memories since the onset of amnesia. Memory loss would begin slowly with momentary occasions of forgetfulness, especially when stopped in the middle of a task. Ribot observed that general amnesiacs lost memories progressively. This began with recent facts, then ideas, and finally sentiments. Eventually the ability to perform motor functions was lost up through the point that complete dementia set in.

The most interesting cases of partial amnesia involved patients with aphasia. Ribot's study of aphasiacs revealed that they progressively lose the ability to form words, both spoken and written, in the same order: descending from proper names to common names, adjectives, and finally to verbs.⁸ The order of language loss engendered by aphasia formed the basis of what is still referenced today as Ribot's law, or the law of regression. The destruction of memories proceeds progressively from the least stable to the most stable, from the scantily repeated to the most frequently repeated. "From the initial term to the final term, the march of amnesia, regulated by the nature of things, follows the path of least resistance, which is to say of the least organization."⁹ Proper

⁸ Ribot drew examples from the work of Baillarger and Falret. See Jules Baillarger, "De l'aphasie au point de vue psychologique," in *Recherches sur les maladies mentales* (Paris: Masson, 1865): 584-601; Jules Falret, "Amnésie," in *Dictionnaire encyclopédique des sciences médicales* T. 3, ed. A. Dechambre (Paris: Mason, 1865), 725-742.

⁹ Ibid., 94.

nouns are the least stable, hence they are the first memories that aphasiacs lose. Verbs are repeated most frequently and are thus held onto the longest.

Ribot conceived language as a series of relations between ideas and the signs used to express them. The former are ideal; they represent the meaning of words. The latter involve motor activities. Speaking and writing are the motor language skills localizable in their neuronal imprint, which Ribot called, borrowing from Maudsley, the “motor residue” of nervous elements. The motor residue is the permanent trace left on the brain by the associations that build up the bodily memories on which the smooth execution of our motor skills relies. They facilitate the automatic functioning of speaking and writing in the form of a neural support network for more subtle associations, such as particular spoken and written signs. Although we don’t always make use of these more feeble associations, the motor residue of firmly installed associations in the brain indicates that we do regularly use general language skills. That is why, according to Ribot, we might easily forget particular words, but not our general capacity to write and speak words.

What drove Ribot’s interpretation of aphasiacs was his distinction between two kinds of memory: organic and psychological. Organic memory is an unconscious biological function typified by what we conventionally call “muscular memory.” It includes basic habits coded into the nervous system, whether inherited from the species, such as the capacity to walk, or developed by the individual, such as the ability to ride a bicycle. Psychological memory is conscious memory that takes the form of an image. Its proper character is the recollection of a past event – what present day psychologists call episodic memory.¹⁰ Ribot repeatedly stressed, “it is impossible to say where memory –

¹⁰ See Endel Tulving, *Elements of Episodic Memory* (New York: Oxford University Press, 1983).

either psychic or organic – finishes.”¹¹ They are the two poles of the associative chain descending into the base of firmly installed motor memories and ascending toward the peak of fleeting psychological images. The most recently acquired memories, those of a lecture for example, are the most personal; in order to recall them we have to assign them a date in the past. The more we recollect a memory, the stronger the associative bond between a present perception and a past image. The stronger the associative bond, the deeper the memory embeds itself, descending toward organic memory. This is the case for a maternal language, or what psychologists now call semantic memory, which is repeated enough to function as smoothly as moving the body’s limbs.¹²

Ribot’s brand of associationism proposed a more dynamic physiology of consciousness than those of Broca and Wernicke. Ribot observed that lesions to neural fibers caused aphasia; but he did not locate memories in particular nerves. Although associations find their support in brain cells, the model did not amount to a straightforward localization of ideas in the brain. Rather, as Pierre Hum clarifies, “applied to memory, mnesic imprints are not localizable in either a delimited region of the body or in the soma of a cell. Every memory engages the totality of the central nervous system in the form of stable dynamic associations between cells.”¹³ Whether Ribot’s dynamic account of aphasia overcame the static localizations of his predecessors, or instead represented the apex of localization in identifying neural complexity, its reductionist endeavor established the problem around which scientific spiritualists and physiological psychologists converged.

¹¹ Théodule Ribot, *Les maladies de la mémoire* (Paris: Félix Alcan, 1881), 49.

¹² See A. M. Collins and M.R. Quillian, “Retrieval time from semantic memory,” *Journal of Verbal Learning and Verbal Behavior* 8 (1969): 240-247.

¹³ Pierre Hum, “Ribot: l’oubli, fait biologique ou fait psychologique?” in *Le moment 1900 en philosophie*, ed. Frédéric Worms (Lille: Presses universitaires du Septentrion, 2004), 239.

Ribot's model drew on the evolutionary psychology of Herbert Spencer and John Hughlings Jackson. Spencer had already established the distinction between conscious memory and unconscious memory that Ribot construed as psychic and organic memory. The organization of new memories, Spencer held, begins with the active recollection of conscious images and deepens with each repetition, until they fall under the automatic execution of unconscious habits. Hence Ribot's proposition at the opening of *Les Maladies de la mémoire*: "memory is, by its essence, a biological fact; by accident a psychological fact."¹⁴ Jackson's chief insight was to treat evolution as the progress toward greater heterogeneity. When applied to individual organisms, Jackson demonstrated that neurological disorders are dissolutions, or what he called "evolutionary regressions." That is, biological functions are lost in the inverse order in which they evolve. On the one hand, each dissolution incapacitates the higher order function, yet on the other, liberates the lower order function.¹⁵ For example, Ribot noted that the dissolution of rational language often involved a more acute sense of emotional language. Similarly, amnesiacs who gradually lost recent memories often reported a surge of past, seemingly forgotten memories.¹⁶

But it was the particular problem of aphasia on which scientific spiritualists' engagement with Ribot hinged. Ribot noticed that aphasiacs are able to recall the idea of an object, but are not able to express its sign.¹⁷ When presented with a fork, for example, aphasiacs would typically acknowledge the object as a fork, moving their head in

¹⁴ Ibid., 1.

¹⁵ For Jackson's earliest reports that were read by Ribot, see: John Hughlings Jackson, "On the study of diseases of the nervous system. A lecture delivered June, 1864," *Clinical Lectures and Reports by the Medical and Surgical Staff of the London Hospital* 1 (1864): 146–158; "Notes on the physiology and pathology of the nervous system," *Med Times Gazette* 2 (1868): 526–528.

¹⁶ Théodule Ribot, *Les maladies de la mémoire*, 165.

¹⁷ Ibid., 127. Bergson uses the same example in *Matter and Memory*, 98.

agreement when asked if it is a fork. When asked to name the object, or even repeat the word “fork,” aphasiacs failed. Whereas the healthy mind takes for granted its ability to translate private ideas into publically recognizable signs, aphasiacs fail to connect the two. Ribot interpreted these cases to mean that the motor mechanism for putting thoughts into actions had been incapacitated. The aphasiac’s mind retains certain ideas but nervous lesions prevent the body from externalizing them. In aphasiacs the connection between psychological and organic memory is thus broken. They can remember language in a purely ideal form, or image-memory, such as the idea of “fork.” The image is no longer tethered to motor-memory: “this memory of vocal and written signs that survives in aphasiacs represents what is called an interior monologue [*parole intérieure*], the minimum of determination without which the mind would incur dementia.”¹⁸ Aphasia, for Ribot, incapacitates the body’s motor capacity to express signs, but not the ability of consciousness to represent ideas.

At the heart of Bergson’s dispute with Ribot was how to explain image-memories. How is it possible to retain a pure image-memory severed from its complementary motor-memory? How can an idea, in other words, persist without its sign? Ribot left the answer to the future of science. He had faith that some day experimental psychology would perfect Broca’s project of localizing language by identifying the seat of image-memories with the same precision that it had already localized the residue of motor-memories. Bergson, however, contended that image-memories are the limit case of localization. Although motor-memories could be located in nervous connections, Bergson held that image-memories are qualitatively different. The latter are peculiar to consciousness, in excess of the brain’s storage capacity. But Bergson’s critique in *Matière et mémoire* grew

¹⁸ Théodule Ribot, *Les maladies de la mémoire*, 120.

out of a wide debate broached by scientific spiritualists in response to Ribot's psychopathology of aphasia.

Image-Memories in Victor Egger's *La Parole intérieure*

In 1881 Victor Egger proposed a resolution to the question left unanswered in *Les Maladies de la mémoire*: how do aphasiacs recognize ideas yet fail to reproduce their corresponding sign? Against the optimistic pretension that psychopathology would some day localize the neural associations that house ideas, Egger's thesis, *La parole intérieure* (1881), claimed that it was impossible.¹⁹ Ideas are the inherent limit, Egger argued, and not a mere stumbling block, to the entire project of localization. Egger's method was qualitative; he sought to describe the experience of recalling image-memories. Pointing to the subtitle, *Essai de psychologie descriptive*, one reviewer noted, "The only method he employs is observation by consciousness or rather by memory."²⁰

Egger generalized from the particular case of aphasiacs. Aphasiacs privately think of ideas severed from outward bodily gestures when, returning to Ribot's example, they acknowledge the word "fork" yet fail to speak or write it. Yet, as Egger showed, we all do the same as part of the internal monologue that occupies consciousness. Whether it streams along unknowingly or preoccupies our attention, the internal monologue is an immaterial dimension of language, which, despite its similarities with outward speech, depends on an independent explanation. Egger hedged much of his argument against the

¹⁹ Although the literal translation of *La parole intérieure* would be *Internal Speech*, the connotation of the French phrase would be more aptly translated into English as *The Internal Monologue*.

²⁰ Victor Brochard, "La parole intérieure, essai de psychologie descriptive par Victor Egger," *Revue philosophique* T. 13 (1882): 410.

English psychologist, Alexander Bain. Bain believed that muscular movement accompanies all intellectual states, and that buccal activity, or mouth movement, always accompanies an internal monologue. Egger pointed to cases in which the internal monologue takes on the voice of others, a phenomenon heightened in hallucinations. Consciousness is aware of the inward sounds of speech, but the body does not express them outwardly. The deeper the descent into consciousness, the more freely sonorous images detach themselves from motor functions. An internal monologue cannot therefore be localized in space, Egger argued, since it lacks a physical dimension. It is a purely temporal phenomenon, what he called, in advance of Bergson, the *durée* of consciousness.

The distinction between inward and outward speech staged an opportunity for Egger to neatly separate the tasks of what he called physiological and descriptive psychology. Physiological psychology studies extended phenomena that occupy space, whereas descriptive psychology concerns unextended phenomena. Since consciousness does not occupy space, Egger took the distinction to mean that only descriptive psychology could achieve a science of consciousness. “In affirming space, we affirm the non-self [*non-moi*]; in affirming duration [*durée*], we affirm the self; the unextended that endures is the self.”²¹ Egger went on to highlight his description of consciousness in strikingly Bergsonian terms: “*I am a pure succession.*”²² Herein marked what Egger saw as the internal limit of psychopathological claims to localize conscious phenomena. Because it takes place only in time, an internal monologue ceaselessly effaces its origins. It cannot be indexed to an anterior sensation or neuronal association since it is not a

²¹ Victor Egger, *La Parole intérieure* (Paris: Félix Alcan, 1881), 111.

²² Ibid.

stable phenomenon. “The self is what flows, what passes or has past, but which, once past, often becomes present again.”²³

La Parole intérieure followed from Egger’s public engagements with psychopathology. In 1877 he published an article criticizing Jules Bernard Luys’ recently published *Le Cerveau et ses fonctions* (1876). The book presented a neurological study of the process by which nervous excitations generate conscious representations by means of what Luys called “brain phosphorescence.” Egger’s critique of Luys defended the dualist position that consciousness is irreducible to matter. A brain function, Egger wrote, “is the function *of* the organ, it is the organ in function, the organ in movement; it is the organ and something else.”²⁴ For consciousness, however, “the function is *sui generis*, apart, without relation to the organ, heterogeneous to the organ and all movement; it is a world apart, the unextended world.”²⁵ The upshot, according to Egger, was a rigid distinction between cerebral anatomy and consciousness: “an insurmountable abyss separates their objects.”²⁶ Intrigued by Egger’s critique, Ribot hosted a debate over the methods appropriate to psychopathology in the *Revue philosophique*.²⁷ The physiologist and future recipient of the Nobel Prize in Medicine, Charles Richet, joined, responding with complete trust in the future progress of scientific psychology. Luys’ book, Richet argued, was but one contribution among many to the yet unfulfilled project of localizing the brain’s functions. Richet later offered his own contributions to studies on amnesia. He reported on what he called “objectification” in somnambulism, a phenomena where

²³ Ibid., 113.

²⁴ Victor Egger, “La physiologie cérébrale et la psychologie,” *Revue des deux mondes* T. 24 (1877): 197.

²⁵ Ibid.

²⁶ Ibid.

²⁷ See Victor Egger, “La Psychologie physiologique,” *Revue philosophique* T. 5 (1878): 231-238; Charles Richet, “Réplique de M. Richet,” *Revue philosophique* T. 5 (1878): 238-240.

sleepwalkers forget their personality and instead act out, following Richet's observations, the roles of generals, bakers, and priests.²⁸ He found Egger's stance, however, detrimental. "Leaving the human sciences [*la science de l'homme*] to logicians who disdain the experimental method," Richet wrote, "is contrary to progress."²⁹ Ribot, delighted by the interest that Richet and Egger inspired, offered both the chance to further pursue the debate in the pages of the *Revue philosophique*.

On the back of his personal copy of Richet's response, Egger jotted notes to himself that would guide his research for *La parole intérieure*. They were questions to which, as Egger described them, "a serious adversary could carry the discussion." Egger scrawled several tentative responses to his imagined interlocutor, clearly a physiological psychologist. They indicate the gravity of the problems of reductionism and localization within an increasingly scientific intellectual climate, as well as the stakes animating scientific spiritualism:

- Is pure independent psychology, according to the introspective method, a science; that is to say, does it surpass the description of facts and explain them? Does it have laws?
- Can brain physiology and psychophysics be separated in practice? Aren't they reducible, by the differences in their methods, so as to depend on one another?

²⁸ Charles Richet, "La Personnalité et la mémoire dans le somnambulisme," *Revue philosophique* T. 15 (1883): 225-42.

²⁹ Charles Richet, "Sur la méthode de la psychologie physiologique," *Revue philosophique* T. 5 (1878): 33.

- Can the definition of the nervous system be updated without a notion of the unconscious? It would be the subsequent result of research on the system of particular nerves.³⁰

Egger's notes offer a historical bridge between his 1877 articles and 1881 thesis at the same time as they also indicate the wider trend that scientific spiritualists began to pursue during the period. The "insurmountable abyss" that Egger affirmed between physiology and psychology in 1877 would give way to a more nuanced engagement with the particular problem of the internal monologue, a problem that emerged from within physiological psychology, notably in Ribot's 1881 *Les Maladies de la mémoire*. Egger preserved in *La Parole intérieure* the distinction that he earlier drew between extended and unextended mental phenomena. But the distinction became less rigid as Egger's thesis put it in service of clarifying the methods appropriate to descriptive and physiological psychology. The notes can be read as an intimate glimpse into the philosopher's aspiration to be seen as rigorous in the eyes of his scientific peers.

The Literary Factory of Alfred Fouillée and Jean-Marie Guyau

Alfred Fouillée and his nephew, Jean-Marie Guyau, advanced some of the most probing critiques of Ribot's memory studies. Neither Fouillée nor Guyau endorsed the strict division by which Egger opposed physiological and descriptive psychology.

Fouillée, for his part, invested his hope for the future of philosophy in psychopathology;

³⁰ Victor Egger, Notes et documents de travail, MSVC 419, Papiers Victor Egger, Manuscrits de la bibliothèque Victor Cousin, La Sorbonne, Paris.

but he aimed to nuance the foundation of Ribot's method, epitomized on the opening page of *Les Maladies de la mémoire* by the declaration, "memory is, by its essence, a biological fact; by accident a psychological fact."³¹

Following a brief professorship at the École normale, Fouillée moved to the hills of Menton overlooking the Mediterranean Sea in 1879. He brought Augustine Tuillier, the young Guyau, and Guyau's fiancée, Barbe Marguerite André. Together, they transformed their villa into a literary factory, churning out books at a prolific pace. André wrote children's stories under the pseudonym Pierre Ulric. Augustine Tuillier took on the pseudonym, G. Bruno, for fear that the conservative press might expose her books as the work of a divorcée.³² In addition to writing school manuals, her most famous literary achievement was *Le tour de la France par deux enfants* (1877), a work read throughout primary schools to consolidate national solidarity. Tuberculosis caused Jean-Marie Guyau's premature death at the age of thirty-three in 1888. The episode was traumatic for Fouillée. "I don't remember a day in the last forty years of my life without some suffering, without some anxiety."³³ His stepson's memory, however, impassioned his determination to write: "I published one and sometimes two volumes per year. I didn't have the time to cut short, since I feel that there remains plenty of things to do and to say, that my life...will be too short for my task."³⁴

Fouillée set about adapting an irreducibly conscious dimension of the experience of time to Ribot's physiology of memory. He took as his point of departure what he saw

³¹ Théodule Ribot, *Les maladies de la mémoire*, 1.

³² Jacques and Mona Ozouf, "Le Tour de la France par deux enfants", in *Les Lieux de mémoire*, Vol. 1, ed. Pierre Nora (Paris: Gallimard, 1997), 290.

³³ Quoted in Augustin Guyau, *La philosophie et la sociologie d'Alfred Fouillée* (Paris: Félix Alcan, 1913), xv.

³⁴ Ibid.

as the outmoded picture of time that Ribot employed. The picture was borrowed from Kant. According to Kant, time constitutes an *a priori* form that all conscious experiences assume. Ribot, to be sure, rejected the notion of *a priori* categories. He saw time as a composite notion that humans progressively acquire as the body interacts with the world.³⁵ Fouillée agreed. He described time as an *experimental* intuition rather than as a transcendental intuition.³⁶ Nonetheless, Fouillée charged that Ribot held onto the Kantian picture of time as a linear form inscribed in space. In the Transcendental Analytic of the First *Critique* Kant described time as “a line progressing to infinity, in which the manifold constitutes a series of one dimension only.”³⁷ Consciousness organizes events along this line as if they occupy sequential points in time. Even though Ribot did not treat time as an epistemological condition anterior to experience, his account was outmoded, according to Fouillée, because it failed to jettison the linear, spatial picture, of time. Kantians, Fouillée claimed, “always gather together time and space on the same line, as if what applies to one would also apply to the other.”³⁸

Ribot acknowledged that the spatial picture of time was central to his theory of recollection. In order to recall a memory, we depart on “a regressive march which, leaving from the present, travels a series of terms more or less long.”³⁹ Traversing the entire associative chain of memories, as if reading the dossier of every past event, would be exhausting if not impossible. So consciousness naturally identifies “landmarks” in the form of significant past events, which facilitate the recollection of certain episodes. It was

³⁵ Théodule Ribot, *Les maladies de la mémoire*, 83.

³⁶ Alfred Fouillée, “Introduction” in Jean Marie Guyau, *La Genèse de l’idée du temps* (Paris: Félix Alcan, 1890), xxxii.

³⁷ Immanuel Kant, *Critique of Pure Reason* 1787, trans. Norman Kemp Smith (New York: Palgrave Macmillan, 1929), 77.

³⁸ Alfred Fouillée, “La mémoire et la reconnaissance des idées,” *Revue des Deux Mondes* 70 (1885): 146.

³⁹ Théodule Ribot, *Les maladies de la mémoire*, 36.

in spatial terms that Ribot appealed to his readers to reflect on “how much this mechanism resembles that by which we locate ourselves in space. There we also have landmarks, abbreviating processes, perfectly familiar distances that we employ as units of measure.”⁴⁰

The spatial picture, Fouillée charged, suits the external dimension of consciousness. But when understood from the internal dimension, temporal experience demands a different picture since memories do not occupy an archive; they are instead co-extensive with the present, actively influencing consciousness. For Fouillée, *appétition* held the key to unlocking this alternative picture: “Time alone is the essential form of memory, and memory, ultimately being the consciousness of appetite, effort, and motor action, is as fundamental as life itself, for life is only appetite tending toward its satisfaction by a series of degrees and moments.”⁴¹

Fouillée’s next step was to bring his alternative picture of time to bear on Ribot’s research. Since time, according to Fouillée, is experienced in two distinct dimensions, Ribot was wrong to treat the conservation and recollection of memories as an identical process. According to Fouillée, these dual operations are distinct.

Fouillée analyzed conservation and recollection in two separate essays. In the first essay, Fouillée argued that conservation is basically a neural process: “each organ is a memory; the eye is a memory of luminous waves and the ear is a memory of sonorous waves.”⁴² Nervous vibrations are the material that conserves memories, and the law of association can readily explain the process. Fouillée invoked a favorite example of

⁴⁰ Ibid., 39.

⁴¹ Alfred Fouillée, “La mémoire et la reconnaissance des idées,” 146.

⁴² Alfred Fouillée, “La survivance et la sélection des idées dans la mémoire,” *Revue des Deux Mondes* 69 (1885): 367.

Ribot's: if I fix my eyes on a red disc and then turn them away, I will momentarily perceive the illusory image of a green disc. This is because the fatigue of optical nerves that register red leaves those that register green to vibrate alone under a white light.⁴³

Fouillée took the example to demonstrate that the conservation of memory amounts to the prolongation of nervous vibrations. Memory conservation is thus a purely physiological, and not explicitly conscious, process.

Conversely, recollection depends on an irreducibly free, conscious activity. To make the point, Fouillée drew on another favorite example to highlight the distinction between conservation and recollection. Toward the end of his life, Linnaeus took pleasure in sitting by the fire in the evening and reading the writings of his youth. Afflicted with amnesia, he would revel in his memory lapses, "How brilliant! How I would like to have written that!"⁴⁴ Although Linnaeus automatically recognized ideas with which he was once familiar, he failed to actively recall that they were *his* ideas. The moral, for Fouillée, is that amnesia impaired Linnaeus' conscious ability to actively recall his memories.

As a consequence, associationism can successfully explain the conservation of memories, but Ribot went wrong, Fouillée held, in believing that the psychological model can also explain recollection. A spatial picture of time is appropriate to the former, since associationism treats memories as localizable units that can be conserved in the associative bonds between neural cells. Fouillée agreed that the brain could provide a physical platform for memories. But since recollection is a non-spatial activity, it cannot be neatly localized. Fouillée argued that recollection adheres to a distinctly non-spatial, appetitive logic.

⁴³ Ibid., 362-363.

⁴⁴ Alfred Fouillée, "La mémoire et la reconnaissance des idées," 147; Ribot, *Les maladies de la mémoire*, 41.

Fouillée conceived his account in memory alongside Guyau, whose *La Genèse de l'idée du temps* (1890) was published posthumously. Guyau agreed that the spatial picture, according to which memory is structured like an archive, is unsuitable to recollection since “generally taking the brain in a state of rest, the images it has are considered as fixed, *clichés*.”⁴⁵ Memories, Guyau observed, are not ready-made. “There is nothing like that in the brain, not real images, but only virtual images, potentials, that only wait for a sign to pass into an action.”⁴⁶ Recollection, according to Guyau, transforms memories into forms of action. Since memories are always actualized in the present, his thesis held, they must necessarily be rendered into a spatial form. The point of view of recollection “is always some scene in space,” Guyau wrote, “some event that happened in a material and *extended* milieu.”⁴⁷ As Paul Ricoeur summarized Guyau’s view, “We localize time by localizing in space. This is literally the *mise en scene* of our remembrances.”⁴⁸ But as to the nature of this transformation, by which recollection renders memories spatial, Fouillée and Guyau subtly diverged. For Guyau, recollection amounts to a knack, “nothing but the art of evoking and organizing these representations.”⁴⁹ That is to say that our mnemonic strategies suffice to explain how we organize memories in spatial terms.

For Fouillée, however, there is a vital logic immanent to the appetitive experience that actively transforms memories into forms of action. The key to recollection turns on forgetting: what requires explanation, according to Fouillée, is how we come to eliminate

⁴⁵ Ibid., 50.

⁴⁶ Jean-Marie Guyau, *La Genèse de l'idée du temps* (Paris: Félix Alcan, 1890), 50.

⁴⁷ Ibid., 70.

⁴⁸ Paul Ricoeur, “From Kant to Guyau,” in *Guyau and the Idea of Time*, ed. John A Michon, et. al (Amsterdam: North Holland Publishing Co., 1988), 157.

⁴⁹ Ibid., 117.

the trail of memories that ideas carry with them. That is because, according to the principle of *idées-forces*, ideas endure in time, and thus necessarily retain their memory. Now the effort we undergo to overcome, for example, the blank befuddlement of forgetfulness amounts to the task of accommodating a memory to the demands at hand in the present.⁵⁰ True to Fouillée's Darwinian understanding of *appétition*, recollection entails an act of resisting other sensations that monopolize our attention. Memories, as it were, compete for our attention. And forgetfulness ensues when certain memories lose out to others, and thus cease to rise to the intentional plane of motor activity. Within this picture, consciousness intervenes in the constant struggle among memories by suppressing those that are not immediately useful. According to Fouillée, freedom inheres in the act of diminishing the influence of memories that do not serve our needs.⁵¹

From this pragmatic, action-oriented account of recollection, Fouillée reconceived Ribot's law of regression: "Among words, the [aphasiac] first forgets proper names, then common names, which are adjectives erected as substantives, then adjectives, then verbs."⁵² Whereas Ribot believed that the trajectory of language-loss follows from the most to least complex memories, or better, according to their associationist organization, from the least to the most often repeated, Fouillée added, "verbs, both passive and active, which survive the longest, are the immediate expression of emotions and actions."⁵³ Verbs are the most resistant to aphasia, in other words, because they best capture the forms of action into which recollection transforms memories.

⁵⁰ Alfred Fouillée, "La mémoire et la reconnaissance des idées," 148.

⁵¹ *Ibid.*, 160

⁵² Alfred Fouillée, "La survivance et la sélection des idées dans la mémoire," 375.

⁵³ *Ibid.*

Fouillée's account of memory, first presented in 1885, established the conceptual contours that Bergson would radicalize in *Matière et mémoire* eleven years later. Chief among them was Fouillée's pragmatist account of recollection as a process that prepares memories to be actualized as forms of action. Bergson first noted in a review, "Mr. Fouillée appears to us to have pushed the analysis of Mr. Guyau further." Fouillée identified, as Bergson saw it, the seamless "process of *changing*" that memory effectuates between the virtual conservation of the past and its actual recollection.⁵⁴ The lone reference to Fouillée in *Matière et mémoire* acknowledges his insight that there is "preformation of the movements which follow in the movements which precede, a preformation whereby the part virtually contains the whole, as when each note of a tune learnt by heart seems to lean over the next to watch its execution."⁵⁵ Despite their divergences, both thinkers critiqued the same shortcoming of psychopathological research, which they both saw as its failure to explain the transformation that memories undergo as recollection makes the past serviceable to the practical demands of the present.

The similarity between Fouillée and Bergson was not lost on Augustin Guyau, the son of Jean-Marie Guyau (and step-grandson of Fouillée): "in opposing the dynamic to the static, time to space, both want to safeguard liberty and novelty in the world."⁵⁶ In a comically hostile manner, Fouillée's biographer hastened to note the lone difference: "Fouillée stays in the domain of experience; Mr. Bergson, believing to stay there, returns to the conception of an elusive and incomprehensible liberty, analogous, despite his

⁵⁴ Henri Bergson, "Analyse de l'ouvrage de Guyau : *La genèse de l'idée de temps* avec un introduction par Albert [sic] Fouillée," *Revue philosophique* T. 31 (1891): 187.

⁵⁵ Henri Bergson, *Matter and Memory*, 94, translation modified.

⁵⁶ Augustin Guyau, *La Philosophie et la sociologie d'Alfred Fouillée*, 88.

intentions, to Kant's noumenon or Schopenhauer's thing in itself."⁵⁷ Aware that Bergson's fame occluded his own, Fouillée nonetheless maintained an amicable relationship. The two just missed each other at the École normale, where Bergson entered as a student in 1878, three years after Fouillée's departure. But they did share many conversations later outside the university: "What a philosopher, Bergson, entirely into science and philosophy," Fouillée reflected, "working with such an upstanding awareness and never set back by fatigue!"⁵⁸ As part of the scientific spiritualist formation, Fouillée and Bergson endeavored to articulate anew a pragmatist account of conscious activity in dialogue with the findings of psychopathology.

Bergson's Critique of Localization in *Matière et mémoire*

"[T]he cerebral process answers only to a very small part of memory," thus summarizes the thrust of Bergson's critique of the psychopathology of memory in *Matière et mémoire*.⁵⁹ He directed the brunt of his critique at Ribot's claim that the brain stores memories, affirming "that [the brain] is rather the effect than the cause, that matter is here as elsewhere the vehicle of an *action* and not the substratum of a *knowledge*."⁶⁰ According to Bergson, the brain functions to actualize memories, but not to conserve them. In line with scientific spiritualism, Bergson apportioned metaphysics and experimental psychology to their respective domains of experience: psychopathology is a science of memories' actualization (or better, the failures of actualization) and

⁵⁷ Ibid.

⁵⁸ Augustin Guyau, *La Philosophie et la sociologie d'Alfred Fouillée*, 88.

⁵⁹ Henri Bergson, *Matter and Memory*, 74.

⁶⁰ Ibid.

metaphysics, a study of their conservation and participation in perception. The reductionism of localization was the first pillar of psychopathology at which Bergson's critique took aim.

Although Bergson critiqued the claims of brain localization, his argument was deeply indebted to neurophysiology. Bergson drew from figures of the brain in circulation during the late nineteenth century. Specifically, he likened the brain to a "central telephone exchange" through which messages are sent but never conserved: "The truth is that my nervous system, interposed between the objects stimulating my body and those that I can influence, plays the simple role of a conductor that transmits, allocates, or inhibits movement."⁶¹ Bergson obtained the figure from his personal copy of *De l'intelligence*, in which Taine adopted the telegraphic figure of the nervous system to characterize the brain as a "*coach [répétiteur] and multiplier*, in which the diverse departments of the gray matter fill in the same functions."⁶² Bergson took the figure to indicate that neuropathologies can only inhibit the brain's action. They cannot destroy memories.

The second pillar against which Bergson struck was the associationist logic underpinning Ribot's law. For Ribot, "All the forms of memory, from the highest to the lowest, have for their support dynamic associations between nervous elements and particular modifications of these elements, at least of cells."⁶³ The positive task of *Matière et mémoire* was to develop an alternative non-associationist, non-reductive logic

⁶¹ Ibid., 44-45. For a critique of Bergson's use of the central telephone exchange metaphor, see Jean-Noël Missa *L'esprit-Cerveau. La philosophie de l'esprit à la lumière des neurosciences* (Paris: J. Vrin, 1993), 137-164.

⁶² Sentence highlighted in Bergson's personal copy of *De l'intelligence*, BGN II 80, Fonds Henri Bergson, Bibliothèque littéraire Jacques Doucet, Paris.

⁶³ Théodule Ribot, *La maladies de la memoire*, 50.

of memories' conservation. This motivated Bergson to articulate the uniquely conscious dimension of memories exceeding the limits of experimental psychology.

Bergson took Ribot's distinction between psychological and organic memory as a point of departure. Organic memory, as Bergson saw it, equips the body with its ability to act. Psychological memory, however, is not geared toward action. Its nature is contemplative. Recalling a past event brings an image before consciousness, but consciousness does not prolong the image into the external world. The image remains a representation. Bergson accepted Ribot's classification of memories, but reinterpreted its meaning. He discerned a difference in kind between organic and psychological memory while Ribot only saw a difference in degree. Whereas Ribot staked the distinction on their degree of stability, Bergson argued that Ribot's distinction belied a more essential difference between the two: namely, organic memories act; psychological memories do not.⁶⁴ Bergson's argument was simple yet precise: the nature of the past is to be no longer present. Recalling an image-memory from the past is a qualitatively different kind of activity than acting in the present with motor-memories. The latter can be located in the body; but image-memories – which, to recall Ribot's experiments on aphasiacs, persist despite motor impairments – depend on a distinctly conscious explanation.

The distinction between image-memory and motor-memory followed from the problem that oriented *Matière et mémoire*: what is the relationship between matter and memory? Bergson traced them back to their respective dimensions of consciousness: perception and recollection. Perception is human's mechanism for acting on matter. By "matter," Bergson meant all of the physical material as understood by the mechanist worldview. Perception is the action-oriented side of consciousness that facilitates

⁶⁴ Henri Bergson, *Matter and Memory*, 68.

humans' ability to negotiate that world. Perception, following scientific spiritualism, does not duplicate or mirror external world objects in the form of a concept. Its purpose is not intellectual; rather, it responds to the demands of what Bergson called "attention to life." That is, perception carves up the organism's perception of matter in order to facilitate action on it. Recollection, however, is human's mechanism for gaining distance from matter and the immediate demands of the present. With that distance, we can pose an image before us and contemplate it: "To call up the past in the form of an image we must be able to withdraw ourselves from the action of the moment, we must have the power to value the useless, we must have the will to dream."⁶⁵

Bergson conceptualized perception and recollection in a similar manner to the distinction he drew in his *Essai* between the temporal and spatial dimensions of consciousness. There, Bergson followed the two dual tendencies to their extremes in order to explain how they co-mingle in experience. Similarly in *Matière et mémoire*, Bergson claimed that in its pure form, perception facilitates action on matter by dividing it into discrete, immobile parts; while in their pure form, memories tend to bleed seamlessly into each other. All experience involves a mix of perceptions and memories. We find ourselves primarily employing perceptive skills as we go about mundane tasks. Memories interpenetrate with those perceptive acts in the quotidian moments where we reflect on our tasks, as well as in exceptional moments where we undergo an intellectual endeavor, think hard, and maybe even philosophize. The extent to which past recollections mix with a present experience corresponds to how willfully we arrest our fixation on the demands of the moment and instead preoccupy ourselves with memory-images.

⁶⁵ Henri Bergson, *Matter and Memory*, 82-83.

In the *Essai* as well as in *Matière et mémoire*, Bergson's conception of freedom was of a piece with the Biranian idea of motor effort. We brush the surface of memory when retracing our steps to recall the series of events that led up to the present. We plumb memory's depths, however, when we struggle to recall the name of a friend seen long ago, or pose a difficult math problem for which rote arithmetic will not suffice. Biran's legacy left an indelible, although under-acknowledged mark on Bergson's distinction between image-memories and motor-memories. Biran, to recall, divided habit into passive and active kinds. The case for Bergson was much the same. Perception makes use of motor-memory, and it is characterized by distraction. Recollection makes use of image-memory, and demands attention. The distinction turns on the effort consciousness exerts. Perceiving repeats the same motor memories, executing tasks and pursuing practical ends with relative ease, while recollection compels us to strain our psychic energy, furrow our brows, and concentrate on images embedded in an intimate and personal past.

The contrast with Ribot's account is legible. Ribot held that recollections are brought into the present by an act of "localization" (not to be confused with the localization of memories in the brain). We localize memories when we sift through the past, a process that Ribot described as a departure following "a regressive march which, leaving from the present, travels a series of terms more or less long."⁶⁶ Traversing the entire associative chain of memories, as if reading the dossier of every past event, would be exhausting if not impossible. So consciousness identifies "landmarks" [*les points de repère*] in the form of significant past events that transport us to certain episodes. Ribot grounded his idea of memory-landmarks in the laws of association: the landmark is a

⁶⁶ Théodule Ribot, *Les maladies de la mémoire*, 36.

strong memory, such as a significant life event; its associative bond with perception has been fortified well enough to transport consciousness immediately to the episode.

Bergson found the entire picture inadequate to explain recollection: “The process of localizing a recollection in the past...cannot at all consist, as has been said, in plunging into the mass of our memories, as into a bag, to draw out memories, closer and closer to each other, between which the memory to be localized may find its place.”⁶⁷ It was precisely in these terms that Ribot appealed to his readers to reflect on “how much this mechanism resembles that by which we locate ourselves in space. There also we have landmarks, abbreviating processes, perfectly familiar distances that we employ as units of measure.”⁶⁸ Bergson’s critique diagnosed the same spatial picture as undergirding the two forms of localization that Ribot advocated: the first is the localization of memories in brain cells; the second is the localization of recollected events. Both forms of localization construe memories as independent entities that occupy a particular locale.

The non-spatial, non-associative logic that Bergson proposed as an alternative construes memory in temporal terms. The problem that the logic served to answer was this: how does the past, despite no longer acting, survive into the present? Bergson’s point was that memory must coexist with the present if the figure of an archive storing memories in the past is an illusion. Yet, we do not witness the entirety of our past before our eyes, not because memories exist elsewhere, but because they are not *useful* in every moment. The name that Bergson gave to the non-spatial, non-associative logic was “virtual.” Pure memory is conserved virtually in the present, ready to be made useful for the pragmatic orientation of consciousness.

⁶⁷ Bergson, *Matter and Memory*, 171.

⁶⁸ Théodule Ribot, *Les maladies de la memoire*, 39.

Bergson dedicated chapter three of *Matière et mémoire* to explaining how pure memory is virtually conserved in the present. By “pure” memory, Bergson meant the entirety of the past that persists, not yet differentiated into discrete image-memories. He showed that consciousness summons an image-memory from pure memory by an act of recollection. But recollection does not *retrieve* particular images; rather, recollection *suppresses* those aspects of memory that do not serve the demands of the present. The recollection of images is an act of elimination and not selection. Against the associationist logic of psychopathology, Bergson argued: “*Association*, then is not the primary fact: *dissociation* is what we begin with.”⁶⁹ Metaphysically speaking, Bergson’s account of pure memory is monist and his account of recollection is eliminative. Both served his pragmatist understanding of perception, whose role is limited to excluding what does not help the organism act within and among matter. Bergson’s pragmatism was indebted to the spiritualist tradition, which he made explicit by invoking Ravaisson: “We cannot see how memory could settle within matter; but we do clearly understand how – according to the profound saying of a contemporary philosophy – materiality begets oblivion [*la matérialité met en nous l’oublie*].”⁷⁰

⁶⁹ Henri Bergson, *Matter and Memory*, 165.

⁷⁰ *Ibid.*, 177.

Bergson divided the structure of memory into three levels: memory-images, pure memory, and perception. In his own figure, Bergson respectively distinguished these three levels along the horizontal line segments AB, BC, and CD.⁷¹ Because it is oriented

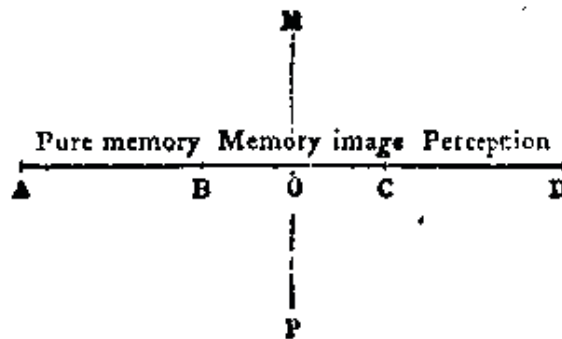


FIG. 2.

toward acting on the material and social world, pure memory imparts to perception only those images suited to the task at hand. But in order to enter perception, memory undergoes a transformation from its pure to its image form (along the entire horizontal

axis AD) such that the memory-images inserted into perception bear the trace of the pure memory from which they were adapted and to which they return. Ribot, by contrast, clung to an associative picture of memory that cuts the entirety of memory along the vertical axis MP. By conceiving recollection as the interplay of sensations and memory-images, Ribot neglected pure memory, the horizontal segment AB, wherein memory is virtually conserved. Ribot's narrow account of memory, Bergson argued, followed from his failure to see that consciousness does not search for memory-images, but instead, pure memory surges into consciousness.

The virtual organization of memory depends on the *usefulness* of the past for action-oriented perception. The easier it is to recollect a memory, the better adapted it is to action. The more difficult it is to recollect, the less useful the memory. The extent to which memories are useful accords with what Bergson called the "planes of memory."

⁷¹ Henri Bergson, *Matter and Memory*, trans. Nancy Margaret Paul and W. Scott Palmer (New York: Macmillan, 1911), 170.

Each plane constitutes a dilation of pure memory. With each plane that we traverse, we further suspend our attention to the present and open consciousness on to the past, passing to a heightened “degree of tension.” According to Bergson, recollection expands and contracts the planes, as if “a nebulous mass, seen through more and more powerful telescopes resolves itself into an ever greater number of stars.”⁷² Bergson mobilized the figure in marked contrast to Ribot’s figure of a march through the archive of memory.

Everything happens, then, as though our recollections were repeated an indefinite number of times in these many possible reductions of our past life. They take a more common form when memory shrinks most, more personal when it widens out, and they thus enter into an unlimited number of “systematizations.” A word from a foreign language, uttered in my hearing, may make me think of that language in general or of a voice which once pronounced it in a certain way. These two associations by similarity are not due to the accidental arrival of two different representations, which chance brought by turns within the attracting influence of the actual perception. They answer to two different mental *dispositions*, to two distinct degrees of tension of the memory; in the latter case they are nearer to the pure image, in the former, they are more disposed toward immediate response, that is to say, to action.⁷³

Bergson admitted that the planes of memory “are certainly not easy to define, but the painter of mental scenery may not with impunity confound them.”⁷⁴ The difficulty follows from the absence of any formula that could explain why certain memories are actualized rather than others. Habit is the sufficient reason. That is to say that consciousness is not an impartial arbiter that judges which image-memories are most useful to the demands of present circumstances. The virtual composition of pure memory structures the process of recollection; it is inseparable from the manner by which consciousness opens onto the past. Descending into deeper planes reveals progressively

⁷² Henri Bergson, *Matter and Memory*, 8th ed., 166.

⁷³ *Ibid.*, 169.

⁷⁴ *Ibid.*, 170.

less useful memories. The mental disposition of each subsequent plane, returning to the above passage, incorporates fewer motor-memories and more image-memories.

The practical significance of the Bergsonian logic depended on the central role of effort. It is less the opacity or remoteness of past events that makes it challenging to recall memories. Rather, the strain we endure to retrieve distant memories is brought about by our effort to disengage from the present. If we were not instinctive creatures equipped with a perceptive mechanism, then an arbitrary barrage of image-memories would inundate us. Yet, if pure memory did not virtually accompany perception, then we would be condemned to endlessly repeat the present. The selection of image-memories depends more on displacing our absorption in actual circumstances and less on searching for a lost past.

The problem left unexplained by the psychopathology of memory, Bergson enjoined, is how consciousness suppresses, rather than retrieves memory, since the nature of memory is to surge from the past on its own accord. Bergson's idea was that pure memory forcefully impinges on us. His claim, according to Gilles Deleuze, is that memory is not a part of consciousness, but that consciousness partakes in memory.⁷⁵ The claim that that consciousness depends on memory underwrote Bergson's critique of Ribot's psychopathology of recollection: we do not actively sift through the archives of memory, Bergson charged, but instead make ourselves receptive to the outpouring of the past.

Memory thus surges into consciousness. We do not choose which memory-images will appear. "If perception evokes in turn different memories, it is not by a

⁷⁵ Gilles Deleuze explains, "Strictly speaking, the psychological is the present. Only the present is 'psychological'; but the past is pure ontology; pure recollection has only ontological significance," *Bergsonism* 1966, trans. Hugh Tomlinson and Barbara Habberjam (New York: Zone Books, 1991), 56.

mechanical adjunction of more and more numerous elements which, while remaining unmoved, it attracts around it, but rather by an expansion of the entire consciousness, which, spreading out over a larger area, discovers the fuller detail of its wealth.”⁷⁶

Bergson found support for this account in the science of dreams. Dreams revealed to Bergson a glimpse of memory in its pure form, untethered to the demands of present perception. Alfred Maury's *Le sommeil et les rêves* (1861) drew on observations of dream states in order to explain the organization inhering in the anarchy of pure memory.

Dreams, according to Maury, are essentially memories in an accelerated form. When asleep, dreams occupy the entirety of our soul to the point that they take on a life of their own. Bergson found in Maury's book the critical insight that memory retains the entirety of the past. In his personal copy of *Les Maladies de la mémoire*, Bergson took note of Ribot's reference to Maury, underlining the passage, “absolutely nothing is lost in memory.”⁷⁷ Bergson's marginalia include a note to self that he should read Maury's book. So it is clear that Bergson read Ribot before reading Maury; but it further suggests that Maury inspired Bergson's idea of pure memory from which no past event escapes.

Dreams served Bergson as a fitting antipode to aphasia. In dreams there is a surplus of memory caused by the relaxation of the nervous system. In aphasia there is a lack of memory caused by a malady of the nervous system. The distinction served Bergson's straightforward critique of the limits of psychopathology. Since aphasia only affects the motor-mechanism that actualizes memories, its symptoms reflect the superficial pole of memory – namely, motor-memories. Yet, despite their motor impairment, aphasiacs nonetheless experience a vibrant internal world of images-

⁷⁶ Henri Bergson, *Matter and Memory*, 165-166.

⁷⁷ Henri Bergson, personal copy of Théodule Ribot, *Les maladies de la mémoire*, 148, BGN – II 40, Fonds Henri Bergson, Bibliothèque littéraire Jacques Doucet.

memories. Bergson thus tackled the problem Ribot confronted: how does the aphasiac acknowledge the fork yet fail to speak or write the word “fork”?

In his personal copy of *Les Maladies de la mémoire* Bergson scribbled a giant “B,” likely signifying *bien* as if to applaud Ribot’s idea, adjacent to the following passage: “amnesia of signs is above all a malady of motor memory; that is what gives it its distinctive character, what makes it present itself under a new aspect.”⁷⁸ It is clear that Bergson emphatically agreed with Ribot’s understanding of aphasia as a motor malady, since it served to explain why image-memories endure in the absence of motor-memories. The motor-memory tied to the word “fork” had been incapacitated. That motor-memory could be located in the injured region of the brain. Yet, Bergson alleged that psychopathologists would only encounter confusion if they claimed, as Ribot had, to locate the corresponding image-memory in the brain. Bergson’s point was that the aphasiac’s image-memory had not been destroyed; it had only failed to be rendered actionable. That is, the aphasiac could not translate the image-memory into a motor-act.

The case of aphasia was a springboard from which Bergson launched a critique of Ribot’s law. Bergson did not contest the order in which aphasics lost words, beginning with proper names and ending with verbs. Rather, Ribot’s law is problematic, Bergson claimed, because it fails to explain the transformation of image-memories into motor-memories. This required an account of the virtual conservation of memory occluded by the path of least resistance followed by the law of regression. The law, Bergson argued, could not apply to the brain structure itself: “We could hardly explain it if the verbal images were really deposited in the cells of the cortex: it would be wonderful indeed that

⁷⁸ Ibid., 122.

disease should always attack these cells in the same order.”⁷⁹ Instead, the regressive order of word loss follows the path by which pure memory transforms into perception. “The fact can be explained if we admit that memories need, for their actualization, a motor ally, and that they require for their recall a kind of mental attitude which must itself be engrafted upon the attitude of the body.”⁸⁰ Proper names are lost first, Bergson inferred, since they are the least harmonious with the with body’s habits; they require more effort to recall. “Verbs, in general, which essentially express *imitable actions*, are precisely the words that a bodily effort might enable us to recapture when the function of language has all but escaped us.”⁸¹

Bergson’s critique diagnosed the spatial, and ultimately Kantian, logic underpinning both Ribot’s effort to localize memories and his associationist explanation of their organization. After demonstrating that both applied only to the corporal domain of motor memory, Bergson cleared the conceptual ground to articulate a alternative logic to explain a qualitatively distinct kind of memory – pure memory – which is activated by the action-oriented perception. Bergson thus overcame the dualism according to which Ribot apportioned psychological and organic memory to consciousness and to the brain respectively. Bergson instead formulated a dualism within consciousness to explain the connection between pure memory and perception. As long as the two are opposed in spatial terms, “like two railway lines which cut each other at a right angle,” then, Bergson urged, their relation is irreconcilable.⁸² But by re-conceiving pure memory and perception

⁷⁹ Henri Bergson, *Matter and Memory*, 120.

⁸⁰ Ibid.

⁸¹ Ibid.

⁸² Ibid., 222.

in temporal terms, then “the rails come together in a curve, so that we pass insensibly from one to the other.”⁸³

Hypnose and Hysteria in the Psychopathology of Pierre Janet

Hypnotism, the psychiatric method that Jean-Martin Charcot made famous during his celebrated demonstrations at the Salpêtrière, was the aspect of psychopathology that captivated the public imagination. Since the seventeenth century, the Salpêtrière had been, in principle, a hospital for women. In reality it functioned as a depository of crippled, epileptic, and insane female outcasts. In 1862 Charcot took over as the chief physician of medical services. He revamped the hospital, transforming it into a medial institute equipped with laboratories and educational facilities. Charcot is still well known for his contributions to classifying the diverse neurological disorders that afflicted the hospital’s nearly 5,000 patients. These included amyotrophic lateral sclerosis (ALS), Parkinson’s disease, and multiple sclerosis. Charcot gained recognition for his work in 1882 when he ascended to the hospital’s chair in diseases of the nervous system. But above all, Charcot achieved enduring fame thanks to his work on hysteria. He established the hysterical paradigm of the *grand attaque*, the four-stage series of symptoms that hysterics displayed. And he lent credibility to the disease, defining it as a neurological disorder, rather than as, like many thought before, a chaotic fit of madness stemming from complications in female puberty.

Hypnotism became part of Charcot’s treatment of hysterics in his weekly demonstrations, first opened to the public in 1879. The audience included psychologists

⁸³ Ibid.

such as Frederic W. Myers, Gilles de la Tourette, a young Sigmund Freud, and Joseph Babinski. They witnessed the female patients, the most celebrated being Blanche, Augustine, and Geneviève.⁸⁴ Charcot dressed the women in hats with long plumes. The plumes' oscillated in accord with hysteric trembles, and the patterns of oscillation served as evidence of the four-part classificatory scheme. Charcot stood alongside the women while drawing diagrams of different tics and spasms on the chalkboard. Once diagnosed, Charcot would proceed to the hypnotic treatment.

Charcot conceived hypnosis as a neurosis uniquely induced in hysterics. The controversial method was that hypnosis imitates hysteria. Hypnosis aimed to fabricate a fantasy world in which patients would submit themselves to transformation. By way of suggestions, Charcot would guide susceptible patients to play out their hysteric gestures and proceed to correct them. The goal was to use hypnotism as a means to make patients believe they were healthy. If hysterical symptoms could be reproduced in hypnotism, then, so Charcot thought, they could just as easily be cured.

Far from the Salpêtrière, Bergson experimented with hypnotism while a *lycée* professor in the provincial town of Clermont-Ferrand. There was a reading salon in the town, a center of intellectual life that made for one of the young Bergson's favorite stomping grounds.⁸⁵ The salon owner, Albert Maire, took interest in Charcot's hypnotism and on occasion invited Bergson to the séances he hosted with the guidance of a professional hypnotizer.⁸⁶ Bergson's experiments were the material of his first full article,

⁸⁴ Asti Hustvedt documents these women's lives in *Medical Muses: Hysteria in Nineteenth-Century Paris* (New York: W.W. Norton, 2011).

⁸⁵ Gilbert Maire, the son of Albert, recounts Bergson's enthusiasm for the séances in *Bergson, mon maitre* (Paris: Bernard Grasset, 1935), 28-29.

⁸⁶ The hypnotizer was Lucien Moutin, who would soon after outline his methodology in *La Nouvelle hypnotisme* (Paris: Perrin, 1887).

which Ribot published in the *Revue philosophique*.⁸⁷ In the article, Bergson set about explaining a particular case of hypnotism induced in a number of young subjects between the ages of fifteen and seventeen. The hypnotizer opened a book before his eyes, allowing the subjects sitting across from him to see only the book's cover. While hypnotized, the subjects announced the number of the page that the hypnotizer was reading, and they could even recite entire lines. A skeptical Bergson explained that the subjects managed to read off the corneas of the hypnotizer, whose eyes functioned as a convex mirror. Under hypnotism, Bergson noted, the subjects had a tendency to inverse the order of words. A rational explanation was in order, Bergson's article concluded, without recourse to any mystic powers of the hypnotizer

Equally far away from Paris, the young Pierre Janet conducted his own hypnotic experiments on patients in La Havre. Janet, a fellow philosophy student alongside Bergson at École normale, also left Paris following the *agrégation* to teach in the town of Châteauroux. His time there was brief, and Janet quickly transferred to a more prestigious *lycée* in the northern town of La Havre. He spent his free spare time volunteering at a local hospital in which the head physicians set aside a separate space for Janet to work with female hysterics. Influenced by Ribot, whose classes he attended while in Paris, Janet hoped the opportunity would provide the fodder for a doctoral thesis in experimental psychology. Also a close reader of Charcot's work, Janet seized the hospital space to conduct fresh experiments. The patients were distanced from the stifling culture of the overfull Salpêtrière. In fact, it was a criticism frequently leveled at Charcot's work: that the hospital conditions contributed to his patients' pathologies. Between 1882 and

⁸⁷ Henri Bergson, "De la simulation inconsciente dans l'état d'hypnotisme," *Revue philosophique* T. 22 (1886): 525-531.

1888 at La Havre, Janet compiled the material for his thesis, *L'Automatisme psychologique* (1889).

Janet added automatic writing to his hypnotic arsenal, a practice where he gave hysterics a pencil, fixed their attention elsewhere, and let them subconsciously scribble thoughts. The first patient was Lucie, a woman with chronic terror fits. Using automatic writing, Lucie revealed that two men had played a practical joke and traumatized her at the age of seven. The trauma became what Janet called a “subconscious fixed idea” that had been replaced by her symptomatic fits. Lucie’s conscious field had been restricted, leading her to forget the episode that she would spontaneously reenact. Hysteria, Janet contended, was a reenactment of subconscious fixed ideas. His goal was to treat the hysteria by destroying the fixed idea in a hypnotic state. Following Charcot, Janet would work on the hysteria by means of suggestion, what he called a “synthesizing treatment” aimed at reeducating the subconscious. Successful reeducation required that Janet steer clear of bringing the fixed idea to the patient’s conscious. He believed this would only change the idea into an obsession, potentially exacerbating the hysteric symptoms. Suggestion had to work on the subconscious phenomenon that manifested automatically.

Janet’s early work is significant for having been written in dialogue with scientific spiritualists. Against Ribot, his teacher in Paris, Janet insisted that experimental psychology ought to bring spiritualist principles into its methodological repertoire. Specifically, he pointed to Biran’s concept of motility.

In a series of articles published in the *Revue philosophique*,⁸⁸ Janet demonstrated

⁸⁸ Pierre Janet, “Les Actes inconscients et le dédoublement de la personnalité pendant le somnambulisme provoqué,” *Revue philosophique* T. 22 (1886): 577-592; “L’Anesthésie systématisée et la dissociation des phénomènes psychologiques,” *Revue philosophique* T. 23 (1887): 449-472; “Les Actes inconscients et la mémoire pendant et la mémoire pendant le somnambulisme,” *Revue philosophique* T. 25 (1888): 238-279.

the phenomenon of “psychological automatism.” The cataleptic states of hysterics were instances of automatic behavior. Total automatism manifests in hysterical catalepsy and diminishes the sense of self. Partial automatism occurs when a part of personality splits off from awareness, manifesting as a personality disorder. In both cases, Janet insisted, the automatic workings of hysterical or otherwise abnormal states were conscious, although the patient was not fully aware of them.⁸⁹ Janet’s work on automatism was instrumental to defining a realm of the subconscious before the term was accepted in common parlance. Alfred Fouillée had already tackled the subject in a short article.⁹⁰ And the psychologist Alfred Binet similarly attempted to demonstrate that hypnosis brings subconscious states to the fore.⁹¹ Janet’s research surpassed both. He showed that automatic psychic states continued until interrupted from the outside. They involve motility; the automatic state had to be acted out. The automatic state produced emotions that expressed themselves as associated gestures.

Janet’s account of psychological automatism drew on two central insights of scientific spiritualism. The first was that motor activity is indivisible from both sensation and conscious experience. If these were united, then, as Janet highlighted, “the study of elementary forms of activity would for us be at the at the same time the study of elementary forms of sensibility and of consciousness.”⁹² Janet explicitly identified Biran’s commitment to the unity of sensation and consciousness as an inspiration.

Specifically, it was Biran’s idea of the *sensation of experience*, which he characterized as

⁸⁹ Janet’s argument was directed squarely against Prosper Despine, who held that patients in hypnotic states exhibit automatic nervous, but not conscious, activity in *Psychologie naturelle* (Paris : F. Savy, 1868); *Etude scientifique sur le somnambulisme* (Paris : F. Savy, 1880).

⁹⁰ Alfred Fouillée. “L’homme automate,” *Revue des Deux Mondes* T. 76 (1886): 548-571.

⁹¹ Alfred Binet, *La psychologie du raisonnement* (Paris: Félix Alcan, 1886).

⁹² Pierre Janet, *L’Automatisme psychologique. Essai de psychologie expérimentale sur les formes inférieures de l’activité humaine*, Vol. 1, 4th ed. (Paris: Société Pierre Janet, 1973), 21, originally published by (Paris: Félix Alcan, 1889).

“a simple affective state” accompanying consciousness: “It is a positive and complete mode,” Biran wrote, “to which we draw closer every time that our intellectual thought weakens and wears away.”⁹³ The implication that Janet drew from Biran was that the primitive feeling of one’s own body, although dimly conscious, is by no means without consciousness, since all conscious activity envelops an affective dimension. Biran, Janet provocatively claimed, was “one of the precursors of scientific psychology.”⁹⁴ By invoking the spiritualist philosopher, Janet urged that experimental psychologists draw from, rather than sever, their spiritualist roots. The reference can further be understood as Janet’s debt to his father, Paul Janet, who championed Biran’s work in his own writings. In this light, the younger Janet wrote *L’Automatisme psychologique* to mend the segregation that Ribot enforced between spiritualist philosophy and experimental psychology.

The second concept that Janet drew from scientific spiritualism was Fouillée’s principle of *idées-forces*. From his observations of hysterics whose automatic psychic states that had to be acted out, Janet concluded that his research “verif[ied] by experimentation one of the most productive ideas of one of our philosophers.”⁹⁵ Citing Fouillée in full, Janet argued that subconscious activity legitimated the principle that “The idea of a possible action is a real tendency, which is to say an already effective power and not a purely abstract possibility.”⁹⁶

Reciprocally, Janet contributed a dynamic, multi-dimension concept of selfhood to scientific spiritualism. Partial automatism manifests what Janet called “impersonal

⁹³ Ibid., 47. Pierre Janet citing Maine de Biran, *Essai sur les fondements de la psychologie. Œuvres inédites* II, ed. Ernest Naville (Paris: Dezobry, 1859), 19.

⁹⁴ Ibid., 23.

⁹⁵ Ibid., 63.

⁹⁶ Ibid. Pierre Janet citing Alfred Fouillée, *Liberté et déterminisme* 2nd ed. (Paris: Félix Alcan, 1884), 3.

consciousness,” a phenomenon he identified in Léonie, a patient in La Havre who acted out multiple personalities. One of her roles emerged under hypnosis in order to please Janet; the other role returned Léonie to her childhood, which she would act out under the nickname, Nichette. Janet was startled to find that Léonie even acted out a third personality when hypnotized. It was the reenactment of a prior personality brought on by hypnosis twenty years prior. Léonie’s alternate childhood personality retained its own alternate personality. Janet concluded that the personalities, multiplied under hypnosis, demonstrate that the self is not a philosophically innocent basis of psychology. It is instead, he contended, a point of return, or synthesis, of various psychic states: “The idea of the self [*moi*] is, indeed, a complicated psychological phenomenon consisting of the memories of past actions, the notion of our situation, our capacities, our body, even our name, which, gathering together all these scattered ideas, comes to play a significant role in our understanding of personality.”⁹⁷ Janet effectively overturned Cousin’s psychology, which posited the self as a logical presupposition of psychology, to which all ideas and sensations could be predicated. But it is important to highlight that Janet did so in order to advance scientific spiritualism.

Janet’s insights proved indispensable to Bergson’s thesis in *Matière et mémoire* that neural lesions incapacitate the brain’s “attention to life,” but do not destroy memories themselves.⁹⁸ Janet observed that when certain memories detach from the central memory of subjects with personality disorders, the patient acts out the different memory groupings according to distinct roles. The memories remain intact, but their dissociation into different roles indicates that they disturb what Janet called the patient’s “sense of reality”

⁹⁷ Ibid., 46.

⁹⁸ Henri Bergson, *Matter and Memory*, 175.

[*fonction du réel*]. As Henri Ellenberger notes, Janet's notion influenced Bergson's concept of "attention to life."⁹⁹ It was already clear to Bergson that "attention to life" could be disturbed when neural scissions impair the body's perceptive capacities. Janet further demonstrated, as Bergson wrote, "Recollections retain their normal aspect, but forego a part of their solidarity, because their sensory-motor base, instead of being, so to speak, chemically changed, is mechanically diminished."¹⁰⁰

Janet defended his thesis at the Sorbonne on June 21, 1889. It was the second thesis in experimental psychology defended before the philosophy faculty since his teacher, Ribot, submitted his thesis on heredity in 1873. Unlike Ribot, however, whose ambition was to free psychology from the yoke of spiritualism, Janet published *L'Automatisme psychologique* in order to stage a rapprochement between science and spiritualism. Psychology's freedom, he contended, was not to be gained by replacing metaphysics with physiology. Both, Janet's thesis concluded, "make parallel descriptions of one and the same thing."¹⁰¹ Janet would stay in Paris, teaching first at Lycée Louis-le-Grand and then at Collège Rollin. Realizing that his philosophy degree would not suffice to propel his career in experimental psychology, Janet pursued a medical degree while also attending Charcot's demonstrations from 1890 on. From 1895 to 1897, Janet taught Ribot's course in experimental psychology in his stead at the Collège de France. With the emphatic support of Bergson, Janet would take over Ribot's permanent position at the Collège in 1902, which he held until 1935.

⁹⁹ Henri Ellenberger, *The Discovery of the Unconscious: The History and Evolution of Dynamic Psychiatry* (New York: Basic Books, 1970), 376.

¹⁰⁰ Henri Bergson, *Matter and Memory*, 175-176.

¹⁰¹ Pierre Janet, *L'Automatisme psychologique*, 177.

Janet's work emphasized the pragmatist orientation of scientific spiritualist' engagements with experimental psychology. He advanced an action-oriented account of conscious activity in parallel with the accounts of Bergson, Fouillée, and Guyau. These thinkers, I hope to have shown, transformed scientific spiritualism: from the study of the contingent structure of consciousness, developed in dialogue with psychophysics, to an inquiry into consciousness' pragmatic action in a shared biological and social world. This transformation primarily unfolded in the *Revue philosophique*, a formative reading community where experimental psychologists published alongside some of the central works of scientific spiritualism. Indeed, it was in these pages where the material for Janet's *L'Automatisme psychologique* first appeared, as well as the initial version of Bergson's *Matière et mémoire*.¹⁰² In this light, scientific spiritualism can be better appreciated as a movement that did not simply oppose the mechanist underpinnings bent of experimental psychology generally, and its quantitative and psychopathological methods in particular, but as a movement that formulated a rich account of the multiple dimensions of consciousness on the basis of scientific research.

¹⁰² Henri Bergson, "Mémoire et reconnaissance," *Revue philosophique* T. 41 (1896): 225-248; "Mémoire et reconnaissance (suite)," T. 41 (1896): 380-399.

Part III

Science and Society In the Third Republic

The rapid influx of experimental psychology and evolutionary biology into late nineteenth-century Paris fundamentally transformed French politics and culture. Not only did these incipient fields shake France's spiritualist tradition, but they also overhauled the place and value of Catholicism, both for French men and women as well as for the religion's public role. The reforms of the Third Republic further unmoored France's intellectual and cultural roots. Following the nation's defeat in The War of 1870, which many attributed to France's retrograde scientific institutions, the newly established Third Republic sought to elevate science as the wellspring of national regeneration. In an effort to surpass Germany, French institutions underwent scientific and secular reforms, most noticeably in education, which, beginning in 1874, inculcated a new curriculum designed to undermine clerical authority and cultivate rational Republican citizens.

Scientific spiritualism was occasioned by and actively steered these tumultuous transformations. Scientific spiritualists sought to rejuvenate the nation's deeply entrenched intellectual and religious inheritance on the basis of science. These thinkers, I am suggesting, cast into stark relief the extent to which the emergent natural and human sciences elevated, rather than eliminated, metaphysics and religion in French society. In the following chapters, I analyze two contexts – secondary education and the Catholic Church – in which scientific spiritualists guided the social resonance of science.

Chapter 5: The Young Bergson as *Lycée* Professor

Before teeming crowds filled his lecture hall at the Collège de France, Bergson was a little known yet tireless professor of philosophy in a provincial *lycée* (the French equivalent of high school). He came to Lycée Blaise Pascal in the town of Clermont-Ferrand in September 1883 and spent five years there. Bergson split his time preparing lesson plans, instructing inside the classroom, and writing his doctoral thesis, *Essai sur les données immédiates de la conscience* (1889). As his students' course notes demonstrate, the three tasks often coincided. Bergson opened the first lesson on psychology, the focal point of the course, by framing the subject in squarely anti-materialist terms: "If sadness were in the heart, if thought were in the head, it would occupy a place there, which by dissecting one could end up finding on the end of a scalpel. But thought does not reside in the brain."¹ He proceeded to articulate the central argument of his thesis, "Thought is nowhere, it doesn't have a place in space, it has a duration [*durée*] like a feeling, but it is not extended."² The classroom offered Bergson a forum to stage a dialogue between scientific psychology and spiritualist philosophy. "It was at Clermont that I made my most essential discoveries. But [the Inspector Generals, François] Evellin and [Jules] Lachelier, who inspected me there, forcefully told me: you have to go to Paris and take your place."³ Shortly after publishing the *Essai* in 1889 Bergson left for Paris to teach at the prestigious Lycée Henri IV.

¹ Course notes written by Eugène Estival and published in Jean Brady, *Bergson Professeur. Au lycée de Clermont-Ferrand, Cours 1885-1886* (Paris : L'Harmattan, 1998), 65.

² Ibid.

³ Cited in Jacques Chevalier, *Entretiens avec Bergson* (Paris: Plon, 1959), 178.

Since its introduction under Napoleon in 1809, philosophy has remained the terminal course of the seven years French students spend in secondary education. *Philo*, as the final year is called, was originally designed to synthesize a scientific and humanistic education. It served as the coronation of students' studies, a term employed during the nineteenth century to signify philosophy's exalted status atop the education system. The course curriculum followed the standardized *programme* released by the Ministry of Public Instruction. After opening with a brief introduction to philosophy, the first section of the *programme* was psychology, followed by logic, metaphysics, ethics, and the history of philosophy. Psychology was the centerpiece of the *programme* since Victor Cousin introduced the section in 1832 from his position atop the ministry. To this day, psychology, under the title, "the Subject," endures as the first section of the terminal philosophy course that all *lycée* students must take before sitting the *baccalauréat*, the official exit examination.⁴ But beginning in 1874, in the wake of the Cousinian regime, psychology became distinctly physiological; it transformed from a *science humaine* to a *science dure* in *lycée* instruction.

This chapter situates the development of Bergson's early thought in the educational context of the French Third Republic. My claim is that the *lycée* philosophy course, and its psychology section in particular, provided Bergson with the opportunity to integrate developments in experimental psychology into his early writings. This assertion is not innocent. Phillip Soulez, Bergson's biographer, warns that it would be "premature to make the published works and the courses into two inseparable halves of the

⁴ Although the content in the *programme* for the contemporary philosophy course has changed, it retains a similar organization. Its five sections, in order, are the subject (with lessons in consciousness, perception, the unconscious, the other, desire, and existence and time), culture, reason and reality, politics, and ethics. For an exemplary guide, see: *Objectif Bac: Toutes les matières terminale I* (Paris: Hachette, 2012).

Bergsonian œuvre.”⁵ Bergson himself acknowledged, “I took as a maxim at the Collège [de France] not to bring my current research into the direct subjects of my courses. That was even more the case for boys sixteen years old.”⁶ While it is certainly true that Bergson’s courses were not expositions of his ideas, I nevertheless want to suggest that the context of higher education, and specifically the experience teaching psychology in the *lycée* philosophy course, was a fundamental condition of Bergson’s emergence as the most successful professor within the milieu of scientific spiritualism.

Following France’s humiliating defeat in The War of 1870, politicians and education reformers placed blame on the nation’s retrograde scientific institutions. In the face of the technologically advanced German Empire, the Third Republic looked to education as the key to surpassing the perpetual foe across the Rhine. The consolidation of the universities and *lycées* mended regional divisions in France, and more importantly, facilitated the dissemination of secular values. Secularism, or *laïcité* as it is known in the French context, functioned as the ideological support for the government’s educational reforms. Defined negatively by the curtailment of religious influences over the official curriculum, *laïcité* found its positive content in scientific instruction. Education “passed on first and foremost a cult of science,” according to Philip Nord, “and the republic elevated that cult into a secular religion, reverencing scientists as men of progress, raising statuses to them and extolling their virtues to the young.”⁷ Bergson belonged to the first generation of Republican philosophy professors charged with the task of inculcating laic and scientific values in order to cultivate rational citizens.

⁵ Phillip Soulez and Frédéric Worms, *Bergson* (Paris: Presses universitaires de France, 2002), 62.

⁶ Cited in Jean Guittou, *La vocation de Bergson* (Paris: Gallimard, 1960), 67.

⁷ Philip Nord, *The Republican Moment. Struggles for Democracy in Nineteenth-Century France* (Cambridge: Harvard University Press, 1995), 32.

The state administered *agrégation* promoted national rejuvenation by accrediting philosopher professors as state functionaries. The selective examination was used to train the educational elite since its inception under Louis XV in 1766. But under the Third Republic, it came to serve the new function of channeling a corps of professors from Paris to the provinces in order to promote laic and scientific values. The *agrégation* conferred an emblem of cultural prestige on young intellectuals at the same time as it greased the cogs of the public educational bureaucracy.

At the conclusion of his studies at the exclusive École normale supérieure in 1881, Bergson finished second in a class of eight *agrégés*.⁸ The grueling examination consisted of appreciating and critiquing three Greek texts, two in Latin, and two in modern French, in addition to delivering an oral lesson. Students spent a year intensively studying the texts chosen by the jury, which is why, as Alan Schrift contends, the *agrégation* played such a profound role in shaping the ideas of French philosophers.⁹ The stronger influence on Bergson's philosophical maturation, however, followed his search for a teaching position in one of the seventy-seven existing philosophy posts in the *lycées*.¹⁰ It was in Clermont-Ferrand, after he passed the *agrégation*, that Bergson developed the ideas for which he became famous:

At the École [normale], I immersed myself in mathematics and physics; I despised the rest, and made a "bad lesson" on the *agrégation* in psychology, which I renounced... It was in the contemplation of the province that I came around to completely changing my point of view: since, while reflecting there, I realized that mathematics could not explain

⁸ "Concours de 1881," *Bulletin administratif du ministère de l'instruction publique*, T. 24 (Octobre 31, 1881): 810.

⁹ Alan Schrift, "The Effects of the *Agrégation de Philosophie* on Twentieth-Century French Philosophy," *Journal of the History of Philosophy* 46, no. 3 (2008): 449-474; Edward Baring employs Schrift's method to analyze the formation of Jacques Derrida's thought in *The Young Derrida and French Philosophy, 1945-1968* (New York: Cambridge University Press, 2011), 222-258.

¹⁰ *Annuaire de l'instruction publique et des beaux-arts pour l'année 1882*, première partie: administration et personnel (Paris: Delalain, 1882), 475.

time, as one perceives it within oneself; and so, everything that I had neglected up until that day as secondary became essential for me.¹¹

As a freshly minted *lycée* professor, Bergson was expected both to write his doctoral thesis and to teach the philosophy class. First employed for a brief stint at Lycée d'Angers, a young women's school, before moving to Clermont-Ferrand, Bergson, like most of his peers, set his sights on one of the sixteen philosophy chairs in Université de Paris system.¹² As Christophe Charle notes, "Paris indeed remains the seat of all the exclusive resources enabling the exercise of intellectual power in the university: the scholarly reviews and societies, juries for recruitment and for the doctorate, national authorities of evaluation, collections of publications, and additional institutes for research."¹³ Following two rejections for professorships at the Sorbonne, the École normale supérieure granted Bergson's wish in 1898. Soon after in 1900, he leapt into the Collège de France, where Bergson remained until his retirement in 1921.¹⁴ By the age of forty, Bergson stood out among his fellow peers for having rapidly ascended the educational ladder from the provincial *lycées* to France's premier teaching institution.

Yet Bergson stood out even more starkly, I want to suggest, for having taken advantage of the psychology section of the terminal philosophy course. Three decades of educational reforms from 1874 to 1902 carried out the scientific imperative of the Third Republic by incorporating the emerging scientific psychology into the philosophy *programme*. The official curriculum released by the Ministry of Public Instruction since

¹¹ Jaques Chevalier, *Entretiens avec Bergson*, 19. The same transformation is recounted by Joseph Desaymard, a student of Bergson, in "H. Bergson à Clermont-Ferrand," *Bulletin historique et scientifique d'Auvergne* (Clermont-Ferrand: Bellet, 1910): 216.

¹² Christophe Charle, *Les Professeurs de la faculté des lettres de Paris, dictionnaire biographique, volume I (1809-1908)* (Paris: CNRS, 2000).

¹³ Christophe Charle, *La République des universitaires, 1870-1940* (Paris: Éditions du seuil, 1994), 191.

¹⁴ Bergson was also a replacement instructor for the chair of Greek and Latin at the Collège de France from 1896 to 1900.

the beginning of the nineteenth century underwent a transformation in its 1874 version, which mandated that psychology open with a lesson distinguishing psychological and physiological facts. The lesson was not only the first in the class's history to recognize the possibility of a physiological basis of consciousness, but it also presented psychology under the rubric of *facts* amenable to experimental research. Subsequent reforms in 1880, 1885, and 1902 deepened the ministry's commitment to updating the psychology section by including more lessons on scientific advancements. Although the lessons were mandatory, their content and organization were left to the professor's discretion. Profiting from an era of academic freedom, Bergson seized the opportunity to stage a rapprochement between scientific psychology and spiritualist philosophy in the classroom. He integrated detailed analyses of the research of experimental psychologists discussed in Section II, such as Théodule Ribot, Gustav Fechner, and Wilhelm Wundt. By the time he left *lycée* teaching, Bergson finished *Matière et mémoire* (1896), the second of his two major books to tackle experimental psychology.

Bergson belonged to the first generation of *lycée* professors who taught the philosophy *programme* in the post-Cousinian era. Victor Cousin oversaw the educational hierarchy in France since 1830, and it was thanks to his efforts that psychology endured as the centerpiece of the philosophy curriculum. For Cousin, psychology was an introspective study inimical to empirical verification. It paved the high road to ontology by examining the faculties of consciousness – sensation, reason, and the will – using metaphysical methods culled from the history of Western philosophy. This brand of eclectic spiritualism constituted the official philosophy of France for much of the nineteenth century. As Jan Goldstein documents, Cousin's educational monopoly

enforced his metaphysical approach to psychology by fashioning the subject's lessons around the self [*moi*], whose self-identity and free activity independent of sensations served to anchor introspective inquiry.¹⁵ Following his death in 1867, the 1874 *programme* was the first to diminish Cousin's influence. The curricular reforms that followed deepened students' exposure to experimental psychology as an increasing number of lessons centered on research conducted in German and British clinics and laboratories. Henri Marion, an architect of the 1880 *programme*, announced that the Ministry of Public Instruction chose to construe psychology as "the science of the *facts* and their *laws*," although Marion acknowledged the subject's indelible debt to Cousin by adding, "it is true that the order of facts, more than any other, provokes metaphysical curiosity."¹⁶ Indeed, the educational upheavals of the Third Republic would not expunge Cousin's mark, but the final decades of the nineteenth century nonetheless witnessed a scientific turn within the spiritualist framework of philosophy instruction. This scientific turn, I contend, explains the rise of a new generation of professors, Bergson chief among them, who advanced scientific spiritualism after becoming conversant with the research agenda of the nascent experimental psychology.

In highlighting the impact of psychology instruction on French philosophy professors, this chapter intervenes in histories of the intellectual and educational culture of late nineteenth-century France. I challenge two approaches that predominate the historiography the period.

The first approach posits continuity between the Cousinian legacy and the

¹⁵ Jan Goldstein, *The Post-Revolutionary Self: Politics and Psyche in France, 1750–1850* (Cambridge: Harvard University Press, 2005).

¹⁶ Henri Marion, "Le nouveau programme de philosophie" in *Les philosophes saisis par l'état*, ed. Stéphane Douiller et al (Paris: Aubier Montaigne, 1992), 516; originally published in *Revue philosophique* T. 10 (1880): 414–28.

educational reforms of 1874 through 1902. In *The Eclectic Legacy* John Brooks III argues that the human sciences in France at the end of the nineteenth century retained Cousin's influence despite the anti-spiritualist pretensions of figures such as Théodule Ribot and Émile Durkheim.¹⁷ Brooks III justifies his claim by analyzing transformations in the *agrégation*, *baccalauréat*, and especially the *programme*, which both steered young scientific thinkers to conform to the French philosophical establishment and reflected the delicate imbrication of scientific and eclectic principles.

More recently, Jan Goldstein asserts the even deeper continuity between Cousin's legacy and philosophy instruction under the Third Republic. "As a regime that embraced scientific positivism and an active anticlerical policy once it became fully 'republicanized' around 1880," Goldstein writes, "the early Third Republic would seem to have had every reason to unseat the old Cousinian philosophy."¹⁸ This was not the case, however, because "Psychology, still presented as the first and foundational branch of philosophy, still operated with a tripartite consciousness comprised of sensation, reason, and will."¹⁹ To test her argument, Goldstein singles out the new lesson included in the 1880 *programme*, "sleep, dreams, somnambulism, hallucinations, and madness," which introduced psychopathological research that appeared to fracture the unity of consciousness constitutive of the Cousinian self. Yet the 1880 *programme* remained tethered to Cousin's eclectic spiritualism, since, as Goldstein posits, the lesson on altered states of consciousness was fully compatible with the contradictory vestiges of the

¹⁷ John I. Brooks III, *The Eclectic Legacy: Academic Philosophy and the Human Sciences in Nineteenth-Century France* (Newark, Delaware: University of Delaware Press, 1998). Brooks III's probing study is limited to the scientific psychologists, such as Alfred Binet, Théodule Ribot, and Pierre Janet, as well as sociologists, such as Émile Durkheim, who retained the stamp of their philosophical training despite their pretention to break from the old spiritualism of Cousin.

¹⁸ Jan Goldstein, "Neutralizing Freud: The Lycée Philosophy Class and the Problem of the Reception of Psychoanalysis in France," *Critical Inquiry* 40, no. 1 (2013): 53.

¹⁹ *Ibid.*, 53.

Cousinian self that endured in other psychology lessons. The *programme*'s "restless attraction to new data was motivated less by wonder," Goldstein argues, "than by a kind of preemptive self-protectiveness."²⁰ Therefore, according to Goldstein, Cousin's influence over *lycée* philosophy was so ingrained that it engulfed any scientific lessons adopted in the late nineteenth century.

To the contrary, I contend that *lycée* philosophy instruction underwent a significant rupture with its Cousinian legacy. Goldstein fails to mention that psychopathological research made its way into the 1880 *programme* alongside scientific re-conceptions of several other lessons. As I will explore further, the precedent for this transformation was already in place in 1874, so that by 1880 the Ministry of Public would seamlessly refashion the lesson on "idea of liberty," for example, into "the voluntary act," a title drawn from the specialized language of experimental psychology.²¹ This is not to suggest that the educational reforms of the Third Republic completely abandoned French philosophy's Cousinian heritage. Rather, my argument is that the scientific lessons introduced into *lycée* philosophy instruction laid the conditions for a scientific turn *within* French spiritualism.

The second historiographical approach focuses on the political stakes of philosophy instruction. Jean-Louis Fabiani extensively documents the role that the *agrégation*, *programme*, and *baccalauréat* played in mediating the intellectual *field*, to use a notion introduced by Pierre Bourdieu, within which "the philosophers of the Republic" wielded their cultural capital.²² These three organs of the academic hierarchy

²⁰ Ibid., 59.

²¹ Henri Marion, "Le nouveau programme de philosophie."

²² Jean-Louis Fabiani, *Les philosophes de la république* (Paris: Éditions de minuit, 1988); See Pierre Bourdieu, "Intellectual Field and Creative Project," *Social Science Information* 8 (1969): 89-119.

reflected the *habitus* that pre-consciously lent identity to philosophy professors' shared position as state functionaries.²³ Indeed, the final decades of the nineteenth century witnessed the vast professionalization of philosophy in France. A new class of academic philosophers bent on publishing books and articles took the place of early nineteenth-century independent philosophers like Maine de Biran and Auguste Comte. Perched atop the hill in the Latin Quarter, the Université de Paris constitutes the central node in sociological studies of the academic circuit wherein professors and students jockeyed for position.²⁴ While sociological methods help historians grasp the changing role of philosophers as a class, they neglect the transformations in education that explain the *meaning* of philosophers' ideas. As a result, Fabiani's vantage point reveals "The homogeneity of the professorial corps... reinforced by the strong proportion of *agrégés* teaching in the *lycées*, which augmented the social and intellectual proximity between secondary and university teachers."²⁵ This chapter, to the contrary, examines the distinct experience that teaching in the *lycées* conferred on young professors still distanced, both geographically and intellectually, from the Parisian universities.

In what follows, I present the series of reforms issued by the Ministry of Public Instruction between 1874 and 1902 as the institutional backdrop to explain the transformation in the scientific character of French philosophy instruction. I proceed to foreground life inside the classroom by analyzing heretofore-neglected historical

²³ See Pierre Bourdieu, "The Genesis of the Concept of *Habitus* and of *Field*," *Sociocriticism*, no. 2 (1985): 11-24.

²⁴ For similar examples of sociological histories of French intellectual culture in the fin de siècle see: Christophe Charle, "Le champ universitaire parisien à la fin du 19^e siècle," *Actes de la recherche en sciences sociales* 47 (1983): 77-89; Louis Pinto, *Les philosophes entre le lycée et l'avant-garde, les métamorphoses de la philosophie dans la France aujourd'hui* (Paris, L'Harmattan, 1987); Fritz Ringer, *Fields of Knowledge: French academic culture in comparative perspective, 1890-1920* (New York: Cambridge University Press, 1992).

²⁵ Jean-Louis Fabiani, *Les philosophes de la république*, 44.

materials: students' course notes and philosophy manuals. Course notes help to build a synchronic account of how Bergson and other philosophy professors took up and adapted the *programme* in the classroom. The mushrooming publication of philosophy manuals, and their regular re-publication, help to build a diachronic account of how institutional changes trickled down into professors' lessons. I aim not only to paint an intimate picture of the teaching of philosophy, but also to explain the singularity of Bergson's ideas. While his colleagues all taught to the same *programme* and *baccalauréat*, Bergson's course notes and use of philosophy manuals illuminate the pedagogical element that lifted him above his contemporaries.

The Scientific Turn in Philosophy Instruction Between 1874 and 1907

Philosophy has endured as a distinguishing feature of French secondary education since it was first mandated as a field of study in 1809. That same year the Imperial University under Napoleon established the École normale supérieure at rue d'Ulm in Paris to train young professors. Access to the terminal course in philosophy remained a privilege open to the sons of the bourgeois élite for most of the nineteenth century. The Falloux law of 1850 decentralized education and charged each department with the obligation to ensure universal primary schooling and to expand secondary schooling. It was the responsibility of the towns to manage *collèges*, but the *lycées* fell under the national purview. While the majority of students attended ecclesiastic, or "free" schools, for much of the century, the Third Republic set about integrating the youth into the public schools and re-organizing philosophy instruction in the service of a national project.

Following the Franco-Prussian War, many in France turned to secondary education as the wellspring of national regeneration. In 1876, twenty-four university professors formed the *Société de l'Enseignement Supérieure* in order to promote educational reforms and collect information about foreign institutions. The journal of the *Société*, the *Bulletin internationale de l'enseignement* (which was later renamed the *Revue*), dedicated the majority of its empirical studies of education to the German system. In France, education reformers straddled the competing imperatives of updating the curriculum with scientific research and preserving French philosophy's distinctly Cousinian heritage. Even though, as Paul Janet reflected, "Germany has become our idol since it humiliated us,"²⁶ it was secondary education that distinguished the French. Philosophy instruction was not mandatory in the German gymnasium, while it marked the apex of the French *lycée*.

By 1907, the psychologist Alfred Binet surveyed three hundred *lycée* philosophy professors to measure the impact of experimental psychology in the classroom.²⁷ He concluded that philosophy instruction had become more scientific and less metaphysical since 1874. Among the 103 surveys returned, Binet noted a curious pedagogical method: "The influence of Mr. Bergson's ideas has, I believe, left the greatest mark. There are even four professors who adopt them without reserve while making them the heart of their teaching."²⁸ As one *lycée* professor wrote, Bergson's engagement with the new

²⁶ Paul Janet in *Pour et contre l'enseignement philosophique*, ed. F. Vandérem (Paris: Félix Alcan, 1894), 54.

²⁷ Binet's stated aim was "simply to know were the repercussions that the original research some of us pursued in psychology had on *lycée* instruction." Alfred Binet, "Enquête sur l'évolution de l'enseignement," *L'année psychologique* 14 (1907): 153.

²⁸ *Ibid.*, 169.

psychology, “so lively and so rich, always seduces many students, at least those who understand something of it.”²⁹

Between 1874 and 1907, philosophy instruction underwent four major reforms: The Ministry of Public Instruction revised the *programme* in 1874, 1880, 1885 and 1902 by incorporating scientific content into philosophy lessons. Yet paradoxically, formal scientific instruction came to be further distanced from philosophical instruction during the period. *Lycée* students had the choice of pursuing one of two degree tracks in either classical or mathematical (modern) studies. With each reform, the importance of philosophy for those pursuing the latter diminished: mathematics students had to spend fewer hours in the terminal philosophy class and the proportion of questions dedicated to philosophy decreased on the mathematics *baccalauréat*. During the final two decades of the nineteenth century, philosophy professors lived through a wave of reforms that many believed displaced philosophy as the coronation of secondary education. While philosophy instruction, on the one hand, lost its unity because of the widening gulf between two *baccalauréats*, on the other hand, the course assimilated ever more scientific concepts in the *programme*. When Bergson began teaching in 1881, he belonged to the first generation of *lycée* professors charged with inculcating the official rapprochement between scientific and philosophical psychology.

But this rapprochement was by no means uncontested. It reflected a synthesis of academic and parliamentary power central to the educational politics of late nineteenth century France. As George Weisz documents, academics and professionals trained in

²⁹ Ibid.

universities made up a significant portion of the government's deputies.³⁰ The Ministry of Public Instruction recruited philosophers into its ranks. François Evellin, a lycée professor and philosophy *agrégé*, and Jules Lachelier, the famed professor at the École normale, served as inspectors general charged with monitoring *lycée* professors. They reported to the deputies of education, which included philosophers such as Ferdinand Buisson, the 1927 Nobel Peace Prize winner who served as director of primary education from 1879 to 1896; Élie Rabier, director of secondary education from 1889 to 1907; and Louis Liard, director of the universities from 1884 to 1902.³¹

Jules Simon first implemented his vision of secondary education as the Minister of Public Instruction from 1870 to 1873. His tenure stood out for its momentary stability among the eleven heads of the ministry during the tumultuous first decade of the Third Republic. A former student of Cousin, Simon saw himself as representing his master's legacy.³² Simon envisioned philosophical instruction as completing scientific training. Left to itself, scientific knowledge abandoned students to educational pedantry, which Simon, citing Montaigne, lambasted: "Just as birds sometimes go in quest of grain, and carry it in their beak without tasting it to give a beakful to their little ones, so our pedants go pillaging knowledge in books and lodging it only on the ends of their lips, in order merely to disgorge it and scatter it to the winds."³³ Scientific instruction, in other words, required philosophy in order to be internalized by students. To pursue his goal, Simon

³⁰ George Weisz, *The Emergence of Modern Universities in France, 1863-1914* (Princeton, NJ: Princeton University Press, 1983), 9.

³¹ See Isabelle Havelange, Françoise Huguet, and Bernadette Lebedeff, *Les inspecteurs généraux de l'Instruction publique: Dictionnaire biographique, 1802-1914*. (Paris: Institut National de Recherche Pédagogique, 1986).

³² See Jules Simon, *Victor Cousin* (Paris: Hachette, 1887).

³³ Jules Simon, *Réforme de l'enseignement secondaire* (Paris: Hachette, 1874), 13; Montaigne, *The Complete Essays of Montaigne*, trans. Donald M. Frame (Stanford, CA: Stanford University Press, 1958), 100.

replaced the imperial council of the University with a council of the ministry whose forty-eight members included numerous philosophers drawn from the university. The spiritualist philosophers Charles Jourdain, Michel Bréal, Ernest Bersot, Paul Janet, and Félix Ravaisson (who served as secretary) were “the friends,” Simon wrote, “who met in my cabinet every Saturday and who, without an official title, by their friendship for the minister and above all for solid scholarship, work with me on all the reforms.”³⁴

It was on July 23, 1874 under the subsequent minister, Anselme Batbie, that the Ministry of Public Instruction released the first *programme* reflecting Simon’s vision. True to the Cousinian heritage, it opened with a brief introduction to the object of philosophy and its distinction from the sciences, followed by the first and most significant subject, psychology. But the 1874 reform also brought about a significant rupture: psychology ceased to be studied as a deductive inquiry, and instead opened with a lesson on the nature of psychological *facts*. Demonstrative of its new empirical framework, the lesson proceeded to distinguish psychological facts from physiological facts. The lesson acknowledged that metaphysics no longer laid claim to the only method appropriate to psychology. “The faculties of the soul,” the second lesson in psychology, ceased to be understood as a metaphysical truth and was instead framed as a working hypothesis. Professors were thus expected to confront the biological approach to experimental psychology from the beginning of their class, effectively barring them from taking for granted the long-standing introspective approach of Cousinian psychology. “It appears therefore that the general tone of this rubric was profoundly marked by the empiricism of a new discipline, psychology,” Bruno Poucet writes, “a sign, along with the presence of political economy, of the defeat of the unity of the philosophy

³⁴ Jules Simon, *Réforme de l’enseignement secondaire* (Paris: Hachette, 1874), 77.

programme, which no longer marked the triumph of spiritualism as the only point of view.”³⁵

On November 25, 1875, the ministry announced the philosophy curriculum for the mathematics degree. It took the form of a minimized *programme* with select lessons and with the entire metaphysics subject eliminated.³⁶ Whereas students pursuing a degree in letters spent eight hours in philosophy out of the twenty-three classroom hours per week, those pursuing a degree in mathematics spent one hour per week in philosophy. As the philosophy course became more scientific, the science degree became less philosophical.

Jules Ferry cemented philosophy’s Janus-faced relation to scientific instruction. Ferry, who was named minister of public instruction February 4, 1879, was a devotee of Comtian positivism.³⁷ He spent the next four years overhauling secondary education, beginning by reorganizing the council of the ministry on February 27, 1880 and by opening a separate bureau of secondary instruction. Its members convened to release a series of reforms, most notably revamping the *baccalauréat* in letters by replacing the Latin composition with a French version and by opening public scholarships for students to pursue graduate training.

The new philosophy *programme* was announced August 12, 1880. It featured an even more extensive psychology section and the first appearance of an ethics lesson in political economy (which included three aspects: production, circulation and distribution, and consumption of riches). The scientific bases of psychology were reinforced. There

³⁵ Bruno Poucet, *Enseigner la philosophie. Histoire d’une discipline scolaire, 1860-1990* (Paris: CNRS, 1999), 136.

³⁶ J.B. Piobetta, *Le Baccalauréat* (Paris: Ballière, 1937), 810.

³⁷ On Ferry’s endorsement of Comte, see Claude Nicolet, *L’idée républicaine en France (1789-1924)* (Paris: Gallimard, 1982), 256-7.

was no more mention of the “faculties of the soul,” as they were previously presented in 1874 along the divisions of sensibility, intelligence, and the will. While the scientific spiritualist Alfred Fouillée celebrated the codified rapprochement between philosophical and scientific psychology,³⁸ Francisque Bouillier of the old spiritualist camp bemoaned the reform: “despite the authors of the program, the word “faculty” is not more a part of our philosophical language than it is a part of our literary language. But the moment seems poorly chosen to ban the concept, while the reformers return more than ever to the honor of physiology, which they believe has definitively localized certain faculties in the brain.”³⁹ The lesson on liberty in the psychology section was no longer titled, “moral liberty or free will, its demonstration, and negation,” reflecting the lesson’s Cartesian heritage. The 1880 reform instead presented liberty as a modality of psychological activity. The number of lessons in metaphysics decreased, while the ethics section became more practical in its design and increasingly sociological in its content. In addition to the section on political economy, ethics emphasized service to national institutions in the form of lessons on suffrage, obedience to the law, military service, and “dedication to the *patrie*.” The result was a less unified *programme*, one that deepened its ongoing engagement with the natural and social sciences.

Yet the gulf between philosophical and scientific instruction also widened. The ministry announced the new philosophy section for the mathematics degree on February 5, 1881. Rather than working from the philosophy *programme* and trimming its lessons, as was the case in the 1874 reform, the ministry decreed an all-together distinct philosophy curriculum for mathematics students. It included lessons in the methods of the

³⁸ See Alfred Fouillée, “La réforme de l’enseignement philosophique et morale en France” *Revue des Deux Mondes* (1880): 332-369.

³⁹ Francisque Bouillier, *L’Université sous M. Ferry* (Paris: Gaume, 1880), 289.

mathematical, physical, and natural sciences, as well as a section on morals. For the mathematics degree, philosophy came to serve the instrumental purpose of elucidating the epistemological foundations of the sciences.

The 1880 reform was coupled with new academic freedom for instructors. As Marion highlighted, “The order adopted in this program does not bind the liberty of the professor, provided that all the questions included are treated.”⁴⁰ The reform opened the possibility for wide divergences among professors, in both their pedagogical style and especially in their treatment of the syllabus. Professors’ newfound autonomy, as Jean-Louis Fabiani suggests, made it possible for works of celebrity philosophers to emerge, from Bergson’s *Matière et mémoire* through Jean-Paul Sartre’s *L’Être et le néant*.⁴¹

The newfound academic freedom had its skeptics. Paul Janet asked, “Do we believe that families can have faith in the University, isn’t there a tacit accord which guarantees that the individual liberty of the professor does not pass certain limits and that he will not stray too far from those standard ideas on which society until now has rested?”⁴² Marion believed that philosophy, properly guided by a rigorous pedagogy, would resolve the problem. He took over the first chair in the Science of Education at the Sorbonne in 1883, three years after promoting academic freedom as part of the 1880 reform. Pedagogy, in Marion’s eyes, was a branch of philosophy, and thus accountable to principles transcending the whim of individual professors. Marion elaborated these principles in his own writing,⁴³ but left their codification to the philosopher and Director of Primary Education, Ferdinand Buisson, who published the *Dictionnaire de pédagogie et*

⁴⁰ Henri Marion, “Le nouveau programme de philosophie,” 510.

⁴¹ Jean-Louis Fabiani, *Qu’est-ce qu’un philosophe français?* (Paris : Éditions de l’EHESS, 2010), 53.

⁴² Paul Janet, “Rapport sur l’enseignement de la philosophie secondaire,” (1880) reproduced in Jean-Louis Dumas, “L’enseignement de la philosophie en 1880,” *Revue de l’enseignement philosophique* (1975): 57.

⁴³ See Henri Marion, *Education dans l’université* (Paris: Armand Colin, 1891).

d'instruction primaire (1887). In 1890, Buisson took over Marion's chair at the Sorbonne.

It was Ferry's campaign to laicize primary and secondary education that left an indelible mark on France. Parliamentary debate over educational *laïcité* began in 1880, a decade after Ferry initially promoted the cause as a young deputy. He did not see the reforms as condemning congregations. The *laïcité* of the state carried forth the work of the revolution, and laic instruction in the schools was the work of Republicans. Ferry invoked the value of active student participation in support of the reforms: "the new methods which took so much development have just begun to spread and triumph; these methods consist of no longer dictating, as by a decree, the regulation of the child, but *make him find himself*; above all they excite and awaken the child's spontaneity; they monitor and direct his moral development instead of imprisoning him in ready-made rules."⁴⁴ President Jules Grévy formally inscribed the separation of church and state into law March 28, 1882. The law barred religious instruction in primary schools, leaving it up to families and private schools to inculcate religion.

Competing conceptions of spiritualist philosophy were pivotal in parliamentary debates over educational *laïcité*. The debate kicked off with a spar between Simon and Ferry. Although philosophy was only taught in the terminal year of *lycée*, a course in civic morals was part of the primary school curriculum. Simon proposed an amendment to eliminate the civics course and to include religious instruction in the terminal philosophy course. Simon thought that a spiritualist philosophical education ought to include a Christian conception of morality, while Ferry endorsed a rational conception of

⁴⁴ Jules Ferry, "Discours au Congrès pédagogique, 2 avril 1880" in *Discours et opinions de Jules Ferry* T. 3, ed. Paul Robiquet (Paris: Armand Colin, 1893), 511.

morality. Speaking on Simon's behalf before the Senate on July 1, 1881, Xavier Delsol defended a program for moral instruction, which, he claimed, "is linked with the spiritualist school and... which proclaims the three great principles of the moral liberty of man, the existence of God, and the immortality of the soul."⁴⁵ In response, Ferry argued that Simon and the fellow senators of the Center-Left feared a chimera. A school without God was impossible, Ferry contended, since the majority of the teaching corps, although not ecclesiastic, already endorsed spiritualist philosophy. The Senate adopted Simon's amendment on July 4, but the Chamber of Deputies rejected it by the end of the month. Ferry's sweeping vision of rational moral instruction won. As Jean-Marie Mayeur notes, "It has not always been sufficiently observed that Ferry's argumentation refused not only education by a Christian school teacher, but also education of any positive religion, namely any 'laïque' religion, including that of the Saint-Simonian religion, the positive religion of Auguste Comte, and of course that "natural religion," to which his principal adversary in the ranks of the Center-Left, Jules Simon, dedicated a book in 1857."⁴⁶

Opening young women's secondary education was an equally momentous reform. Thanks to the Republican deputy, Camille Sée, the law of December 21, 1880 organized public *colleges* and *lycées* for girls.⁴⁷ The reform extended Ferry's secularizing imperative. In bringing young women under public tutelage, the state chipped away at ecclesiastic schools' authority. Unlike secondary school for boys, there was no *baccalauréat*; young women received a *diplôme d'études secondaires*, which was not a vocational degree. "For the great majority of those who voted for the law," François

⁴⁵ Cited in Pierre Ogner, *Une école sans Dieu? 1880-1895. L'invention d'une morale laïque sous la IIIe République* (Toulouse: Presses Universitaires du Mirail, 2008), 60.

⁴⁶ Jean-Marie Mayeur, "Jules Ferry et la laïcité," in *Jules Ferry: fondateur de la République*, ed. François Furet (Paris: Éditions EHESS, 1985), 154.

⁴⁷ In defense of the law, Sée founded the journal *L'enseignement secondaire des jeunes filles* in 1881.

Mayer writes, “women’s access to schooling was not first of all designed for their personal blossoming, but rather for the stability and harmony of the household.”⁴⁸ Hence Ferry’s defense of the law in 1882, “Equality in education is the reconstituted unity of the family.”⁴⁹ There was no Latin education or philosophy instruction, leaving young women without the respective foundation and coronation of their education. During the third through fifth years, however, there was a morals class, which included thinkers like Kant and a discussion of psychology.

To ensure that local departments carried out the reforms, Ferry’s ministry expanded the role of the inspectors general. Created in 1802 under Napoleon, the inspectors monitored all public schools across the three levels of instruction. Under Ferry, two were assigned to primary schools, six to secondary schools (evenly shared between letters and mathematics), and eight to universities (three for letters, three for sciences, one for law, and one for medicine). Appearing in each classroom once a year, the inspectors graded the professors. Soon after Ferry assumed the ministry, the philosopher Jules Lachelier became an inspector general for secondary education. Once the professor of so many *normaliens*, Lachelier now surveyed their performance beyond his courses at the École normale supérieure. Alongside the other inspector, the former philosophy professor François Evellin, Lachelier saw to it that professors dictated lessons clearly and encouraged students’ participation. The fate of all *lycée* professors, and especially that of Bergson, hinged on the evaluations of Lachelier and Evellin.

⁴⁸ Françoise Mayeur, *L’enseignement secondaire des jeunes filles sous la Troisième République* (Paris: Fondation nationale des sciences politiques, 1977), 13.

⁴⁹ Jules Ferry, *Discours et opinions de Jules Ferry* T. 1, ed. Paul Robiquet (Paris: Armand Colin: 1893), 304

Lachelier served as a primary intermediary between philosophy professors and the Ministry of Public Instruction. When many expressed their dissatisfaction with the density of the 1880 *programme*, it was up to Lachelier to propose an alternative. He interviewed *lycée* professors in 1884 and came up with two recommendations: eliminate the lesson in political economy (since few were prepared to teach it) and minimize the role of the history of philosophy.⁵⁰ What followed was a new *programme* released on January 22, 1885.⁵¹ The number of weekly hours that students in the letters degree spent in the terminal philosophy course was increased to nine, while professors no longer had to teach the political economy lesson. It instead became the watered-down “relations between morals and political economy.” Élie Rabier, who drafted the curriculum for the psychology section, pared away metaphysical lessons such as “the idea of God” and “the idea of the external world.” Lachelier re-named the “metaphysics and theodicy” section “metaphysics,” and, against the scientific trend, added a lesson titled “providence and natural religion.” Marion commanded the logic section, further shedding its content. The final section, “history of philosophy,” was replaced with “notions of the principle philosophical doctrines.” The lineage it traced commenced with Socrates and, as if extending an olive branch to the old guard, concluded with Cousin.

An updated *baccalauréat* followed on January 28, 1890. While the coefficient for philosophy increased to fifty percent of the version in letters, it was reduced to twelve percent of the version in mathematics. On June 4, 1891, the mathematics degree was renamed “modern education.” Its new status confirmed the worries already brewing among philosophy professors about the fate of their discipline. “Philosophy retreats into

⁵⁰ See *Revue de l'enseignement secondaire et de l'enseignement supérieure* (1885): 508-509.

⁵¹ *Bulletin Administratif du Ministère de l'Instruction Publique* T. 37 (1885) : 213-216.

letters and away from the sciences,” wrote Émile Boutroux, inveighing against provincializing the philosophy course. He thought it instead “rests on science and on letters as two columns; and it collapses as soon as one is eliminated.”⁵² The widened gulf between the degrees in letters and mathematics had the effect of consigning philosophy instruction to a marginal role. The experimental psychologist Théodule Ribot welcomed the declining significance of philosophy: “most [of the students] are put off by it; others intoxicate themselves in generalities and formulas that have no use.”⁵³ Fouillée, however, went so far as to argue that all *lycée* professors ought to be trained in philosophy “so that all professors are, as much as possible, penetrated by the philosophical spirit.”⁵⁴ In 1899, the parliamentary deputy, Alexandre Ribot, commissioned a report including the input of Boutroux and Fouillée.⁵⁵ The report led Rabier to coordinate a project to reform secondary education, which began October 15, 1900.

What followed was the reform of 1902, which further fragmented philosophy instruction. Students now had the choice of pursuing four degrees instead of two.⁵⁶ “So choose the easiest, the one that conforms the most to the taste you think you have,” retorted Fouillée.⁵⁷ Philosophy professors found it more difficult to recruit students into their classrooms while it also became possible for students pursuing degrees in medicine and law to study neither Greek nor Latin. In the eyes of many professors, the reform was the last blow to the linguistic backbone of philosophy instruction, shortsightedly

⁵² Émile Boutroux in *Pour et contre l'enseignement philosophique*, ed. F. Vandérem et al. (Paris: Félix Alcan, 1894), 33.

⁵³ Théodule Ribot in *Ibid.*, 28.

⁵⁴ Alfred Fouillée in *Ibid.*, 70.

⁵⁵ See Alexandre Ribot, *Enquête sur l'enseignement secondaire* (Paris: Belin Frères, 1899). The report also included the notable spiritualist philosophers, Gustave Belot and Félix Ravaisson.

⁵⁶ These were divided into tracks A (Latin and Greek); B (Latin and modern languages); C (Latin and Sciences); and D (modern languages and sciences).

⁵⁷ Alfred Fouillée, *La Conception morale et civique de l'Enseignement* (Paris : Éditions de la Revue Bleue, 1902), 27.

cementing the practical orientation of secondary education. One newspaper even portrayed the reform as France's "intellectual disarmament" before Germany.⁵⁸

Released on May 28, 1902, the new *programme* elevated the scientific dimension of philosophy by further trimming its metaphysical orientation.⁵⁹ "Our old philosophy must still be conserved," Louis Liard announced, "but while *reducing its excessive dialectics and developing the scientific spirit.*"⁶⁰ The metaphysics section was demoted to a mere three lessons instead of seven, the last of which was titled, "metaphysical relationship between science and ethics." The final section dedicated to the history of philosophy, over which Cousin's legacy still claimed a waning foothold, was eliminated. The same was the case for the philosophy syllabus in the mathematic and medical tracks. No mention was made of the history of philosophy and its great thinkers. Instead, the syllabus was organized into two parts: elements of scientific philosophy and elements of ethical philosophy.

The reform of 1902 brought the dual tensions propelling the educational upheavals since 1874 to a climax. More scientific than ever, on the one hand, yet distanced from scientific instruction, on the other, the terminal philosophy course looked starkly different from its Cousinian ancestry. 1902 brought a cessation to the chronic reforms to the philosophy course, which lasted until the Ministry of Public Instruction introduced the contemporary philosophy *programme* in 1960. But at the beginning of twentieth century, the course had been dethroned from its exalted status atop secondary

⁵⁸ Gebhart, *La Voix nationale* (April 7, 1902).

⁵⁹ *Bulletin Administratif du Ministère de l'Instruction Publique* T. 72 (1902): 760-62.

⁶⁰ Louis Liard, *Le nouveau plan d'études de l'enseignement secondaire* (Paris: Cornély, 1903), 11.

education.⁶¹ Fouillée responded by urging, “The philosophy class must remain *for everyone* a *terminal* class, the most obligatory of all, since it must raise *all* students above *all* of their particular studies,” but his words rang hollow, the echoes, as it were, of a bygone era.⁶² At once more precarious and scientific, the period of educational reforms between 1874 and 1907 established the institutional conditions driving philosophers to revamp the spiritualism of the past on the basis of the sciences of the late nineteenth century.

Confronting Psychology in the Classroom

Lycée students pursuing a classical degree spent on average eight hours a week in the philosophy classroom. The typical day lasted fifteen hours, four of which were shared between two courses, while the rest were spent studying.⁶³ The philosophy professor usually opened the class by dictating a summary of the day’s lesson, which students copied in their notebooks. The French system promoted scrupulous note taking, to the point that students scrawled every “and,” “but,” and “however” of the professor’s dictation. Students would rewrite their notes and submit them to the professor the following day. Following the lesson, students were welcome to pose questions. The professor would conclude by distributing essay prompts. “The professor expounds... and

⁶¹ See Anne-Marie Drouin-Hans, “Sciences naturelles et philosophie: les enjeux d’un territoire conceptuel,” in *Sciences naturelles et formation de l’esprit. Autour de la réforme de l’enseignement de 1902*, ed. Nicole Hulin (Lille: Septentrion, 2002), 107-128.

⁶² Alfred Fouillée, *L’Enseignement au point de vue national*, 2nd ed. (Paris : Hachette, 1909), 145.

⁶³ Bruno Poucet, *Enseigner la philosophie*, 70.

the student composes,” as a typical dissertation manual presented the method: “The former is a kind of scientific work, the latter is a work of art.”⁶⁴

Most *lycées* were boarding schools where students lived through the year. And life inside them left much to be desired: “Never-ending and obscure corridors, smoke-filled classrooms, bare and narrow lessons, the freezing atmosphere of dormitories, heady kitchen odors too close to the cafeteria, unclean lavatories, dusty courtyards, soulless parlors,” so one former *lycée* administrator described conditions in the late nineteenth-century.⁶⁵ No wonder so many professors desired to escape the provinces and teach in the more refined Parisian institutions!

The inspectors general monitored philosophy professors. Whether the professor spoke clearly, held the students responsible, and used relevant examples, were all criteria that the inspectors employed when evaluating professors’ performance. Following the 1880 reform, the inspector general François Evellin enjoined philosophy professors to begin the course with the philosophical lexicon: “the first duty of a professor is to create a rational vocabulary.”⁶⁶ Evellin outlined the two best teaching methods: the expository method, whereby professors read a lesson and answered questions from the previous day’s, and the dialectical method, whereby the professor poses a series of questions to lead students through the lesson (“cold calling” was standard practice). Evellin deemed the latter “the method the most appropriate for the formation of a youth, who, in order to

⁶⁴ Émile Boirac, *La dissertation philosophique* (Paris: Félix Alcan, 1890), xvii.

⁶⁵ Paul Gerbod, *La vie quotidienne dans les lycées et collèges au XIXe siècle* (Paris: Hachette, 1968), 16.

⁶⁶ François Evellin, “La philosophie au lycée – vocabulaire, méthode, enseignement,” *Revue de l’enseignement secondaire et de l’enseignement supérieur* 4 (1884): 164.

become a resource for the country, must penetrate in all directions of thought, before we ourselves have even done so.”⁶⁷

In 1885, Evellin visited Bergson’s class at Clermont-Ferrand and wrote a positive report.⁶⁸ Bergson’s evaluations helped to expedite his ascent up the academic hierarchy. In 1894, Lachelier evaluated Bergson as a professor at Lycée Henri IV in Paris. The inspector praised the “rigor of his method,” returning the next year to write another glowing report: “complete clarity compatible with his depth, and only here and there are some things a bit artificial for his thought and a bit thin on development.”⁶⁹ Soon after in 1896, Bergson was selected to teach courses in Greek and Latin philosophy as a docent at the Collège de France, where he took a full professorship in 1900. Bergson had a natural talent for oratory. But he achieved notoriety as a thinker for having seized hold of the psychology curriculum. Teaching motivated Bergson to read scientific articles voraciously, and he treated his *lycée* course as an experimental forum in which to bring scientific psychology in dialogue with spiritualist philosophy.

An essay prompt scrawled in the notebook of one of Bergson’s students in an 1893 course at Lycée Henri IV reveals the close engagement between scientific and philosophical concepts in the classroom. Bergson had students respond to the question, “What does the philosophical spirit consist of? Determine the nature of the philosophical spirit by opposition with the scientific spirit and common sense.”⁷⁰ “Common sense”

⁶⁷ Ibid., 170.

⁶⁸ The headmaster of Lycée Blaise Pascal recounts: “Mr. Evellin, inspector general of philosophy classes, inspected Mr. Bergson’s class. He expressed to me his complete satisfaction that is was well managed and praised the professor, whose excellent lesson on the *Novum Organum* he listened to with interest.” Cited in Henri Bergson, *Leçons Clermontoises I*, ed. Renzo Raghiani (Paris: L’Harmattan, 2003), 10-11.

⁶⁹ From Bergson’s dossier at the Archives Nationales. cited in Philip Soulez and Frédéric Worms, *Bergson*, 88.

⁷⁰ “Cours de Philosophie: notes prises par René Waltz à Lycée Henri IV 1893,” Cahier IV, 307, MSVC 307, Papiers Henri Bergson, Manuscrits de la bibliothèque Victor Cousin, La Sorbonne, Paris.

carried the particular meaning of a phenomenon's appearance, which traditionally functioned as the starting point of dialectic reasoning in French philosophy instruction. Taking the concept of external perception as his example, the student compared, first, the utility of perception for survival according to common sense; second, the function of perception in making predictions according to science; and third, the knowledge that perception gleans from reality in itself according to philosophy. Although the student concluded, "there is therefore a real opposition between the philosophical spirit and the scientific spirit,"⁷¹ his outline reflected Bergson's method of setting scientific and philosophical concepts in mutual dialogue.

Contrasting Bergson's performance in the classroom with that of his spiritualist contemporary, Jules Lagneau, highlights the extent to which Bergson's engagement with the psychology curriculum contributed to his prominence. A fellow *normalien* who passed the *agrégation* in 1875, six year before Bergson, Lagneau pursued the same career trajectory. He hopped from *lycées* in Sens (1876-78), Saint-Quentin (1879-80), and Nancy (1880-1886). Lagneau made it to Paris in 1886, taking a professorship at Lycée Michelet where he remained until his premature death in 1894 at the age of forty-three. In contrast to Bergson's magisterial production, however, Lagneau managed to publish only a few review articles in the *Revue philosophique* during his lifetime.⁷² He achieved belated fame as a *lycée* professor. And it was thanks to his student, Émile Chartier, the future philosophy professor who adopted Alain as his *nom de plume*, that Lagneau's

⁷¹ Ibid.

⁷² Jules Lagneau, "Traité de Dieu, de l'homme et de la Béatitude de Spinoza, P. Janet," *Revue philosophique* T.7 (1879): 67-79; "De la métaphysique, sa nature et ses droits dans ses rapports avec la religion et avec la science, pour servir d'introduction à la métaphysique d'Aristote, Barthélemy Saint-Hilaire," *Revue philosophique* T.9 (1880): 210-235; "Spinoza, his life and philosophy, Fr. Pollock," *Revue philosophique* T.13 (1882): 306-315.

notes enjoyed posthumous publication. But since Lagneau hardly invoked scientific examples in the classroom, he failed to earn the respect of the inspectors general, which accounts for his failure to ascend to a Parisian university.⁷³

Lagneau, like Bergson, dedicated the bulk of his philosophy course to psychology. As one student commented, “During the major part of the academic year, he only treated the introduction to philosophy and psychology extensively. All the rest was taught briefly or passed on by means of copied texts.”⁷⁴ Lagneau’s approach to the course, however, was markedly less scientific than Bergson’s. Lagneau swiftly handled the first psychology lesson on the distinction between psychological and physiological facts. A student’s notes from an 1886 course read: “It is known that in order to conceive of certain thoughts, we have to make use of a part of the brain... One might be tempted to substitute psychological knowledge for physiological knowledge, which arrives at tangible results.”⁷⁵ Like Bergson, Lagneau believed that there is a strict separation between the two. “Physiological science can only go back to conditions of conditions: it would not know how to seek the reason for facts, but only the conditions in which they are produced.”⁷⁶ In similarly summary fashion, Lagneau addressed required topics, “comparative or descriptive psychology,” “physiological or explanatory psychology,” and even “psycho-physics,” under the lesson, “the objective form and experimental method in psychology.”⁷⁷ But Lagneau made no references to scientific psychologists. It was thus unsurprising to find that inspectors as early as 1879 wrote in their reports:

⁷³ André Canivez, “Jules Lagneau, professeur et philosophe : essais sur la condition du professeur de philosophie jusqu’à la fin du XIXe siècle” (PhD diss., Université de Strasbourg, 1965), 368.

⁷⁴ Comments made by Amédée-Thierry, a student of Lagneau in 1892-93, in *Ibid.*, 371-372.

⁷⁵ Notes taken by Mr. Lejoindre. See Jules Lagneau, *Cours de psychologie 1886-87*, Vol. 2, *La psychologie. Objet, méthode, et division*, ed. Emmanuel Blondel (Dijon: RDP de Bourgogne, 1997), 24.

⁷⁶ *Ibid.*, 47.

⁷⁷ *Ibid.*, 54.

“Course too metaphysical.”⁷⁸ Obligated to address physiology, Lagneau dispensed with the lesson, leaving the sciences behind in order to advance to what he saw as the heart of philosophy.

When Lachelier evaluated Lagneau’s class in 1887, he wrote a positive review: “His class is one of the strongest that I have seen this year; not only do the students respond well and voluntarily, but they also handle the subjects with ease and clarity in their essays.”⁷⁹ But when another inspector, Élie Rabier, visited two years later, the report was hardly as warm: “Without a doubt, no one can teach contrary to his doctrine, and unfortunately yours, I do think, is among the most difficult to teach because of the originality of your point of view, which is completely metaphysical.”⁸⁰ Rabier advised Lagneau to temper his abstract lessons with at least three scientific examples per week, “so that students could study sensations as ordinary facts.”⁸¹

Bergson, by contrast, tackled the same lesson on the distinction between physiological and psychological facts in the same year, 1886, by forcefully articulating the stakes of contemporary psychological research. “Our moral life consists of science, art, and religion, but we cannot at all see how nerves cells, if they existed alone, could coordinate themselves in a manner to bring about these great thoughts and beautiful feelings.”⁸² Bergson went on to cite Wilhelm Wundt and Paul Broca before placing these authors in a historical lineage, which, along with the phrenologists Franz Gall and Johann Spurzheim, sought to localize mental functions in the brain. In the thirteenth lesson on

⁷⁸ “Rapports des Inspecteurs généraux de 1879,” F17 22934, Archives nationales, Paris.

⁷⁹ Cited in Jules Lagneau, *Cours intégral 1886-87. Volume 1 : histoire de la philosophie*, Emmanuel Blondel (Dijon: RDP de Bourgogne, 1996), 15.

⁸⁰ Cited in André Canivez, “Jules Lagneau,” 364.

⁸¹ Ibid.

⁸² Notes taken by Joseph Désaymard in Henri Bergson, *Cours I. Leçons de psychologie et de métaphysique. Clermont-Ferrand, 1887-1888*, ed. Henri Hude (Paris: Presses universitaires de France, 1990), 33.

psychophysics, Bergson laid out Fechner's theory as well as that of like-minded psychophysicists, Joseph Delboeuf and Ewald Hering. Bergson argued "the experiments and Fechner's law are very debatable, even for those who admit the possibility of calculating sensation. We could even go farther: we can wonder if a similar law would not be vicious in its very principle, for what does it mean for sensations to double, triple, or quadruple another?"⁸³ Bergson entered into and elaborated psychophysics' research program in order to arrive at the thesis of his *Essai*: conscious states are distinctly qualitative, and thus not measurable.⁸⁴

Psychology was central to both Bergson's and Lagneau's teaching. The difference between the two, I want to suggest, turned on their respective engagements with experimental psychology and metaphysics: whereas Lagneau took metaphysics as psychology's point of departure, Bergson took it as the subject's point of arrival. In his notes for Lagneau's lesson, "psychology and metaphysics," Alain wrote, "the true science of the spirit is not psychology, but metaphysics," since metaphysics reveals the principle of the unity of the self on which thinking depends.⁸⁵ Bergson, by contrast, oriented his psychology lesson around research in experimental psychology in order to demonstrate that it led to conceptual problems that yield metaphysical concepts. While Lagneau's rigidly spiritualist commitments gained little purchase in an intellectual climate marked by the rapid influx of physiological methods into psychology, Bergson opened the study of consciousness to science.

⁸³ Jean Brady, *Bergson Professeur*, 69.

⁸⁴ Bergson recounts having delved into psychophysics because "it was on the order of the day and, in the field of an examination Fechner's theory, I had the chance to be understood and followed." Charles Du Bos, *Journal I (1922-23)* (Paris : Corr  a, 1946), 63-68; reproduced in Henri Bergson, *  crits et paroles* vol. II, ed. R.M. Moss  -Bastede (Paris : Presses universitaires de France, 1957), 238-240.

⁸⁵ "Notes de cours prises par E. Chartier (1888)," NAF 17718, Papiers d'Alain, Biblioth  que nationale de France.

Both Bergson and Lagneau used the same psychology manual, Élie Rabier's *Leçons de philosophie*.⁸⁶ Originally published in 1884, the manual underwent twelve re-
 editions until its last in 1912. (Although each reissue offered little new content, it did give
 the publishing house, Hachette, the opportunity to insert new advertisements for other
 manuals.) A heavy tome of 676 pages, Rabier's manual was dedicated solely to
 psychology, and it offered the most comprehensive introduction to the subject. It was
 Rabier's belief that "Philosophy collaborates with scientific studies, in the sense that it
 must first of all better understand science, and appreciate it all the more."⁸⁷ Rabier's
Leçons de philosophie was one of the most widely used manuals of the period, as Binet's
 1907 survey of professors confirmed.⁸⁸ In fact, it was the same manual that the young
 Marcel Proust used as a *lycée* student in 1886.⁸⁹ Perhaps its success was due to the fact
 that the author served in prominent educational positions, first as inspector general before
 becoming the director of secondary instruction in 1889. It is likely that Lagneau used
 Rabier's manual because he received a free copy.⁹⁰ But Alain suggested that it was
 merely out of reverence to the inspector general that Lagneau mentioned it at all during
 his lectures: "Rabier was the "pedant"...kept in hand during his inspection."⁹¹

It is clear from the notes taken by students in Bergson's classes that he regularly
 incorporated and even critiqued Rabier's manual. In the same lesson on the distinction
 between physiological and psychological facts, the manual advanced the spiritualist line:

⁸⁶ See Marcel Conche, "Bergson à Clermont," *L'Enseignement philosophique* 47, no. 2 (1996): 6.

⁸⁷ Élie Rabier, *Du Rôle de la philosophie dans l'éducation* (Paris: Delalain, 1886), 4.

⁸⁸ Alfred Binet, "Enquête sur l'évolution de l'enseignement," 213.

⁸⁹ Clippings from Élie Rabier, *Leçons de philosophie. I Psychologie* (Paris: Hachette, 1884), 49-57, NAF 16611, Fonds Marcel Proust, Bibliothèque nationale de France.

⁹⁰ Rabier's letters at the Institut de France and the Bibliothèque nationale de France are peppered with notices sent to philosophy professors who received a copy of his manual. The publishing house, Hachette, maintained a list of professors who were sent free copies.

⁹¹ Alain, *Souvenirs concernant Jules Lagneau* (Paris: Gallimard, 1925), 722.

“It is inexact to assimilate spiritual facts, or functions of the moral life, to organic facts, or functions of the physical life.”⁹² But where Rabier hastily dispensed with certain philosophical notions, Bergson was apt to add nuance. For example, Rabier glossed over the doctrine of realism, which, his manual claimed, “no longer exists in history; today it can only serve to illustrate a memorable adage.”⁹³ Although he disagreed with the doctrine, Bergson nonetheless laid out its tenets, and encouraged his students not to treat realism as a “poetic fantasy.”⁹⁴

Bergson’s discussion of the notion of unconscious psychic facts is even more revealing. Experimental psychologists of the late nineteenth century construed the unconscious as the domain of physiological processes taking place outside of consciousness (a construal notably different from either Freud’s or Pierre Janet’s understanding, which did not reduce unconscious drives to the body). In the lesson on consciousness, Rabier’s manual disputed the notion of the unconscious on the grounds that psychic facts do not exist outside of consciousness, but are minimally conscious: “The hypothesis of the unconscious is useless, since all the services that one claims of the *absolute* unconscious can be easily asked of a *relative* unconscious (made of small perceptions), since nothing stops us from admitting that the gradations of consciousness go until infinity.”⁹⁵ Notes from Bergson’s course at Clermont-Ferrand in 1887 indicate that he remained faithful to Rabier’s claim.⁹⁶ But by 1893 in Paris, Bergson took full advantage of his elevated teaching position and leveled a critique. Adding an additional

⁹² Élie Rabier, *Leçons de philosophie*, 22.

⁹³ *Ibid.*, 306

⁹⁴ Henri Bergson, *Cours de psychologie de 1892-1893 au lycée Henri-IV*, ed. Sylbain Matton and Alain Panero (Paris: SÉHA, 2008), 220.

⁹⁵ Élie Rabier, *Leçons de philosophie*, 68.

⁹⁶ Henri Bergson, *Cours I. Leçons de psychologie et de métaphysique. Clermont-Ferrand, 1887-1888*, 91.

lesson on the problem of unconscious sensations, Bergson asked, “How can we explain them? A first solution would consist of purely and simply denying the possibility of unconscious psychic facts. That is where several contemporary psychologists stop, including Rabier. Their argument can be summed up thus: a psychological fact is by its very definition a conscious fact.”⁹⁷ Bergson presented the work of Wilhelm Wundt and Herbert Spencer, as well as philosophers such as Hippolyte Taine and Rudolf Lötze, who countenanced sensations governed by mechanical laws operating outside of consciousness. Although Bergson disagreed with these thinkers, he cautioned students that it would be “too easy to decide the issue quickly,” and instructed them to appreciate the problem at stake: “Without a doubt, the perfectly psychological state is a conscious state, but this property of psychological states, as important as it may be, is not the only one. Even though there are states that might not resemble the properties of conscious, psychological facts, they are infinitely more conscious than physiological or physical facts.”⁹⁸ Rather than dismiss scientific psychologists’ notion of unconscious states outright, Bergson seized the notion as a springboard from which to elaborate the multiple dimensions of consciousness. This would become a guiding principle of his subsequent book, *Matière et mémoire*, in which Bergson argued that memories, rather than residing outside of consciousness in the brain’s neural tissue, inhere in diverse planes of consciousness, some of which are more easily accessible than others.

Bergson made use of two other manuals in the classroom: Paul Janet’s *Traité élémentaire de philosophie* as well as his *L’Histoire de la philosophie, les problèmes et*

⁹⁷ Henri Bergson, *Cours de psychologie de 1892-1893 au lycée Henri-IV*, 162.

⁹⁸ Ibid.

les écoles.⁹⁹ The former was groundbreaking for having been the first psychology manual to include diagrams of the brain, as well as the sensory organs of the ear and eye, the nervous system, and spinal cord [see Figures I and II]. Conceding that contemporary advances in scientific psychology left the Cousinian heritage outdated, Janet decided to

Figure I Diagram of vertical brain section¹⁰⁰

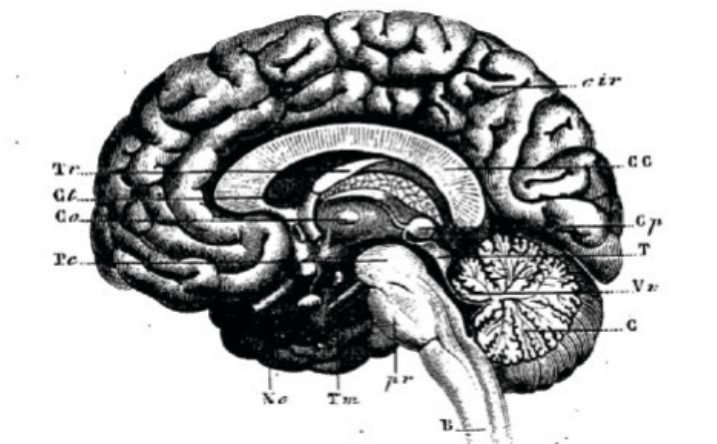


Fig. 2. — Section verticale médiane de l'encéphale.

cir, circonvolutions. — CC, corps calloso. — Tr, trigone ou voûte à trois piliers. — Gl, cloison transparente. — Co, cornues optiques et corps striés. — Cp, glande pinéale. — T, tubercules quadrigémeaux. — Vv, valvule de Vieussens. — Pe, pédoncules cérébraux. — pr, protubérance annulaire. — B, bulbe. — Tm, tubercules mamillaires. — C, cervelet, montrant l'arbre de vie. — No, nerf optique.

Si l'on sépare les deux hémisphères l'un de l'autre par une coupe verticale, l'encéphale à l'intérieur présente l'aspect de la figure ci-dessus. La plupart des organes figurés ont été définis plus haut : signalons seulement le *trigone* et la *cloison transparente*, sortes de lames qui continuent le corps calloso et déterminent avec lui le plan qui sépare les deux hémisphères. On remarquera l'arbre de vie que présente la coupe médiane verticale du cervelet.

open the textbook,
following a brief
introduction, with a
significant
neurophysiology lesson.
Grounding his approach in
the claim that “All
philosophy must depart
from what really exists,”
Janet defended his decision
to incorporate
physiological data by
appealing to the avowed
spiritualism of the manual:

“By leaving out a discussion of the body and the role it plays in our life, we leave a dangerous weapon in the hands of materialism; for this part of our being, which, set up and displayed in its truth, can not at all jeopardize

⁹⁹ Marcel Conche, “Bergson à Clermont,” 6.

¹⁰⁰ Ibid., 21.

what is higher in us.”¹⁰¹ Janet saw his manual as a strategic line of attack in the face of the “philosophical crisis,” which he announced in a book by the same name in 1864.¹⁰²

The physiology lesson consisted of a thorough description of the human body, the organs and their nutritional functions, and the anatomy and functions of the nervous system,

Figure II Diagram of lateral brain section¹⁰³

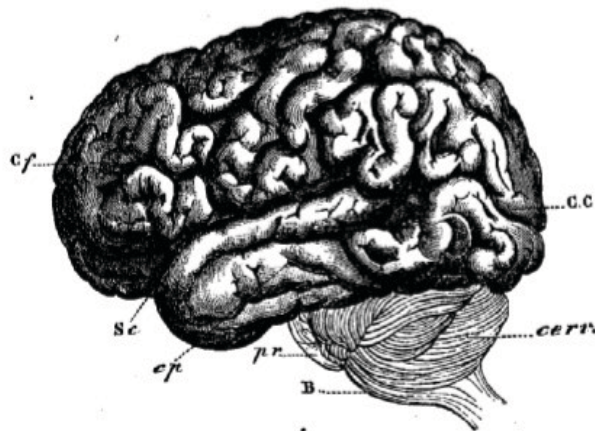


Fig. 1. — Face latérale de l'encéphale.

Cf, circonvolutions frontales. — Cc, circonvolutions occipitales. — ep, circ. pariétales ou temporo-
rales. — Sc, scissure de Sylvius. — pr, protubérance. — cerv, cervelet. — B, bulbo.

On voit par cette figure que les circonvolutions du cerveau sont divisées fictivement en trois parties, que l'on appelle les lobes du cerveau: le lobe antérieur, qui se compose des circonvolutions frontales (Cf); le lobe postérieur, des circonvolutions occipitales (Cc), et le lobe moyen des circonvolutions pariétales (ep). La scissure de Sylvius est la séparation qui existe entre le lobe antérieur et le lobe moyen du cerveau.

On sait que la protubérance (pr) et le bulbo (B) sont deux parties de la moelle allongée.

including an extensive discussion of the reflex arc. The subsequent chapters of the *Traité* advanced higher in the hierarchy of psychological complexity, from affective phenomena, sensations, and memory, to recent psychopathological discoveries on sleep, dreams, and madness. Janet divided his textbook into two classes of psychology, “on

the one hand those aspects which immediately pertain to the body, and which we share in common with animals, and on the other hand those aspects raise us higher and belong only to man.”¹⁰⁴ It was along these lines that Janet distinguished physiological and

¹⁰¹ Paul Janet, *Traité élémentaire de philosophie à l'usage des classes* (Paris: Delagrave, 1879), vi.

¹⁰² Paul Janet, *La crise philosophique* (Paris: Germer Baillière, 1865); also see his *Le Cerveau et la pensée* (Paris: Germer Baillière, 1867).

¹⁰³ Ibid., 22.

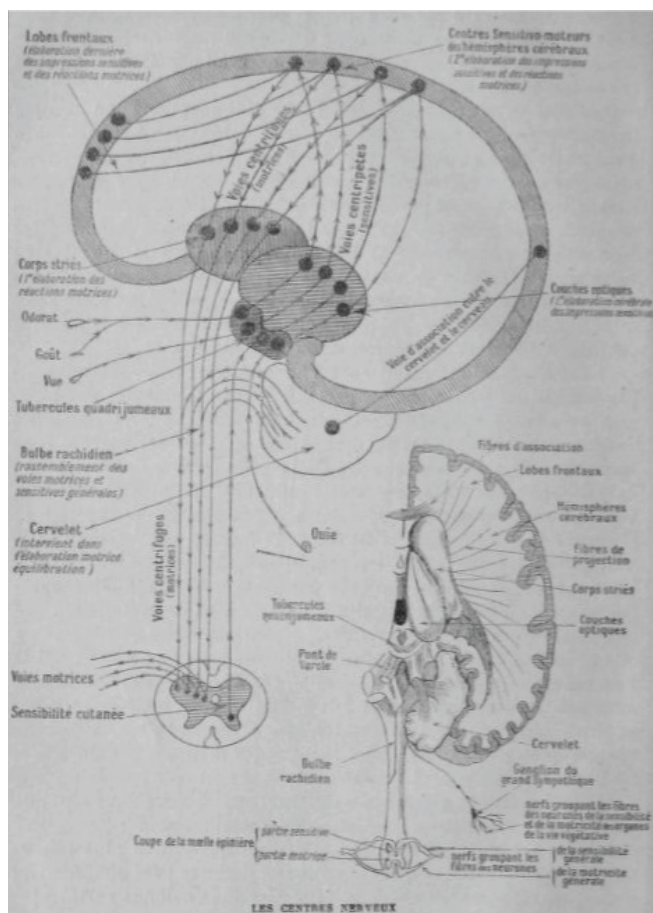
¹⁰⁴ Paul Janet, *Traité élémentaire de philosophie*, vi.

metaphysical methods respectively; and it was central to philosophy's mission to demonstrate that the former, pursued to the limits of brain studies' explanatory power, intractably lead to problems of consciousness, notably the relation between mind and body, that only metaphysics can address. This epistemological division of labor ensured that the conclusions drawn from brain research would not exceed the science's reach and vitiate the spiritualist notion of freedom, which for Janet inheres in the irreducible act of thinking that distinguishes humans from animals. But this division of labor was neither evident, nor, in Janet's eyes, respected by physiological psychologists. Janet deemed it essential that the responsibility of instructing lycée students in neurophysiology rest squarely in the hands of philosophy instructors.

Janet's *Traité* set the precedent for future philosophy textbooks such as Abel Rey's *Leçons élémentaires de psychologie et de philosophie* (1903), which included even more extensive diagrams of the brain and nervous system [see Figures III and IV]. Rey, a philosophy professor and historian of science at the Université de Dijon, launched his career by publishing the most advanced psychology textbook following the 1902 reform to the programme. *Leçons* featured diagrams of the sympathetic nervous system and the anatomy of nerves in relation to the brain and spinal column. Sensory-motor functions were also represented in tables localizing nervous centers in the brain's grey matter, including the centers of linguistic memory (divided into the motor images of writing, vocal motor images, vocal auditory images, and visual images of words) as well as the centers of sight, taste, and smell. Although hardly a spiritualist partisan, Rey nonetheless employed Janet's epistemological division of labor between physiological and metaphysical psychology in order to "avoid distorting the minds of young students, by

carefully distinguishing what fits scientific study and what is the simple object of philosophical reflection.”¹⁰⁵ The division reflected Rey’s commitment to

Figure III Diagram of autonomic nervous system ¹⁰⁶



psychophysical parallelism, the doctrine that nervous transmission and conscious activity are two aspects of the same psychic phenomena. But the division equally served philosophy’s pedagogical mission to demonstrate that “Metaphysics begins there where science and experiments can no longer say anything.”¹⁰⁷

Janet’s subsequent

manual, *Éléments de philosophie scientifique et de philosophie morale*, pursued this method by constructing morality on the basis of psychology.¹⁰⁸ The laws of consciousness uncovered by experimentation only regulated sensations, Janet argued, whereas the laws of society depend on human volition. By explicitly taking account of physiological data, Janet enjoined philosophy professors to resist the reductionism into

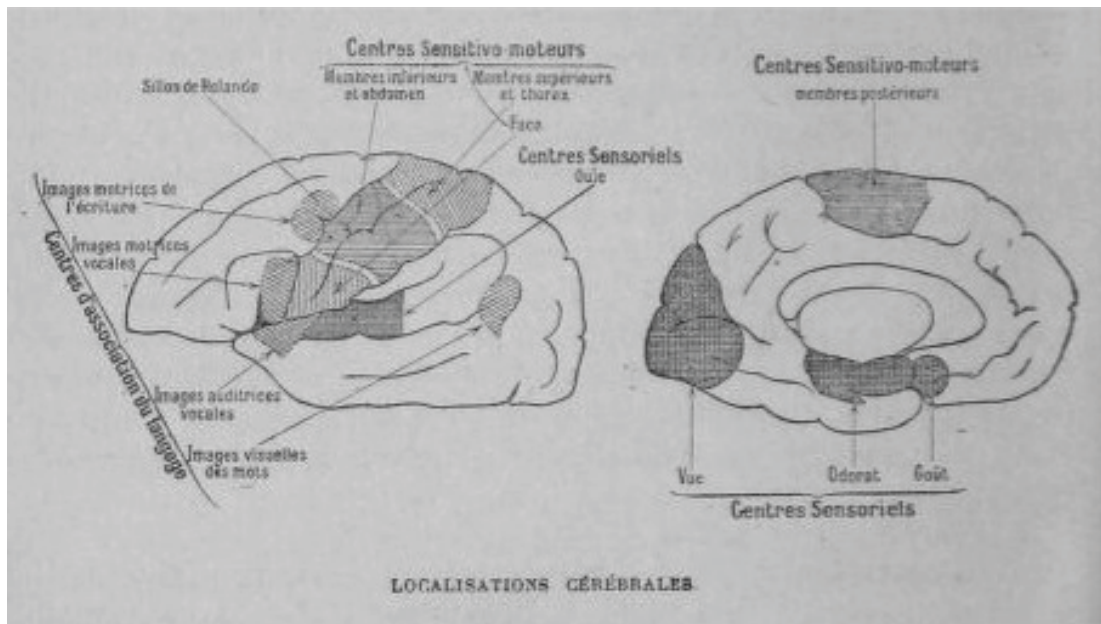
¹⁰⁵ Ibid., i-ii, Rey’s emphasis.

¹⁰⁶ Abel Rey, *Leçons élémentaires de psychologie et de philosophie* (Paris : Édouard Cornély, 1903), 29.

¹⁰⁷ Ibid., 15.

¹⁰⁸ Paul Janet, *Éléments de philosophie scientifique et de philosophie morale* (Paris: Delagrave, 1890).

Figure IV Diagram of sensory-motor cerebral localizations¹⁰⁹



which philosophy risked falling at the hands of experimental psychologists.

The other manual that Bergson used, *L'Histoire de la philosophie, les problèmes et les écoles*, co-written by Janet and Gabrielle Séailles, was distinct in that it organized the history of philosophy according to problems and schools, rather than according to individual thinkers. The psychology section was organized into positivism and contemporary German and British experimental psychology. Therein, Janet and Séailles advanced a vision of spiritualism updated on the basis of the sciences: “Psychology, by calling the new sciences to its aid, by renewing and even transforming itself, remains a science of interior observation, a creation by means of sympathy.”¹¹⁰ The collaboration between Janet, a stalwart of the Cousinian spiritualism, and Séailles, a proponent of scientific spiritualism, represented, as one reviewer noted, “the contemporary state of

¹⁰⁹ Ibid., 144.

¹¹⁰ Paul Janet and Gabrielle Séailles, *Histoire de la philosophie, les problèmes et les écoles*, 3rd ed. (Paris : Delagrave, 1899), 40.

university philosophy in both its persisting traditions and in the new spirit reinvigorating them.”¹¹¹

Bergson’s engagement with science in the classroom reflected the organization of Paul Janet’s manuals. By setting philosophical concepts in dialogue with problems arising from experimental psychology, philosophy ceased to find its foundation in the Cousinian march of history, and instead found justification in then-contemporary research. “Without teaching philosophy to children, how can we bring them to pose for themselves, even in very vague form, some of the problems to which philosophy seeks the solution?” Bergson queried while reflecting on his teaching methods. “These problems emerge naturally in biology, physics, and even in mathematics.”¹¹² In both his thought and his pedagogy, Bergson conceived philosophy as leaping beyond the sciences.

Science and Metaphysics in the Clash of Manuals

The new era of academic freedom opened under the Third Republic galvanized the market for publishing manuals by leaving it up to professors to choose which to use in their courses.¹¹³ Philosophy rode the wave as new publishing houses sprung up in Paris.

Between 1874 and 1879, there were 20 new philosophy manuals, 9 between 1880 and

¹¹¹ Emile Beaussire, “*Histoire de la philosophie, les problèmes et les écoles* par Paul Janet and Gabrielle Séailles,” *Revue pédagogique* T. 13 (1888): 71.

¹¹² Henri Bergson, “La place et le caractère de la philosophie dans l’enseignement secondaire,” séance du 18 décembre 1902, *Bulletin de la Société française de philosophie*, no. 2 (1903): 46.

¹¹³ The Ministry of Public Instruction reserved the right to survey and censor manuals following the reinstatement of philosophy instruction in 1864 under the Second Empire. But the Ministry never told professors which manuals to adopt. The responsibility of surveying manuals was left to local administrations, which kept few records of the manuals professors used. It was ultimately up to professors to choose their own manuals.

1884, and 14 more following the 1885 reform.¹¹⁴ Yet with the relative calm following the reform of 1902, a mere 6 new philosophy manuals appeared between then and 1907, the year concluding this study.¹¹⁵ Most were written by philosophy professors seeking to achieve momentary fame by publishing their course notes in lieu of more significant scholarship.

There were four types of philosophy manuals: pedagogical books, which professors used to guide their own teaching; manuals published by and for religious schools; dissertation manuals, which instructed students how to write philosophy essays; and educational manuals used in the terminal class of the public *lycées*. I focus on the final type.

Most philosophy manuals shared a general form. They opened with an introduction in which the author clarified recent reforms to the *programme* that prompted a re-edition. When he was honest, the author would also make his philosophical commitments explicit. This was a characteristic feature of the manuals used under Cousin's tenure. "The doctrines of the manual are the pure and strict spiritualist doctrines," a typical introduction read, "which the University, under the impulse and leadership of an illustrious philosopher, arduously sets about propagating."¹¹⁶ With their increasingly scientific temperament under the Third Republic, fewer manuals conveyed such idolatry. A list of the lessons contained in the *programme* followed the introduction. Then the bulk of the manual featured the contents of the lessons, with italicized headings

¹¹⁴ See Alain Choppin, *Les Manuels scolaires: histoire et actualité* (Paris: Hachette, 1992). The publication of manuals in all *lycée* subjects escalated during the period. While in 1867 only 188 manuals were published, by 1873 there were 602; and in 1883 the number of manuals available leapt to 933.

¹¹⁵ A complete list of philosophy manuals is found in Bruno Poucet, *Enseigner la philosophie*, 404-408.

¹¹⁶ Amedée Jacques, Jules Simon, and Émile Saisset, *Manuel de philosophie à l'usage des collèges* (Paris : Joubert, 1846), vi.

indicating the most important paragraphs. The greatest difference among manuals turned on the principles, philosophers, and examples their authors chose to include.

These choices were especially revelatory of the transition from eclectic to scientific spiritualism. The contrast between two paradigmatic manuals, one defending the old spiritualism, the other championing the new, scientifically updated spiritualism, elucidates just how institutional changes brought about this significant intellectual shift.

Charles Jourdain's *Notions de philosophie* was the longest lasting philosophy manual to survive Ferry's reforms. Originally published in 1847, the manual underwent eighteen editions until its last in 1888. Jourdain wrote the first version of his manual on the basis of the notes he had prepared while teaching the philosophy course at Collège Stanislas and added to them with subsequent editions. Since the *collège* was private, affording him a wider range of curricular choices, Jourdain freely promoted Christian spiritualism. His subsequent work for the Ministry of Public Instruction, however, provided an official platform from which Jourdain disseminated the manual for public schools as well. The first edition was originally published as *Questions de philosophie* with a mere 127 pages.¹¹⁷ During the suppression of philosophy instruction under the Second Empire, Jourdain renamed his manual, *Notions de logique*, which by 1859 doubled in size. Despite the change in name, Jourdain foregrounded the importance of metaphysics and ethics: "On the questions that interest [students'] morality and happiness, like free will, duty, and fate, God prepared for them the interior lights that not even the laziness of the spirit and misbehavior of the will can successfully extinguish."¹¹⁸ Following the reinstatement of philosophy in 1864, Jourdain changed the title to *Notions*

¹¹⁷ Charles Jourdain, *Questions de philosophie pour l'examen du baccalauréat ès lettres*, 1st ed. (Paris: Hachette, 1847).

¹¹⁸ Charles Jourdain, *Notions de logique*, 6th ed. (Paris: Hachette, 1859).

de philosophie, and championed Cousin again. The lessons were peppered with Cousinian thought. For example, Jourdain echoed his master's disdain for Spinoza by characterizing the *Ethics* as a "gloomy system, which upsets the most elementary notions of common sense, and annihilates any ethics and every religion."¹¹⁹

Jourdain saw the 1880 reform as a direct affront to the Cousin's eclectic spiritualism. His manual's subsequent editions impugned the measures Jules Ferry had taken to render philosophy instruction scientific. "We continue to offer to the youth," Jourdain inveighed, "positive affirmations of the soul and God, while casting aside those equivocal conclusions that betray the master and implant dangerous uncertainties in the student's thought."¹²⁰ In Jourdain's eyes, Ferry had inscribed moral relativism into the curriculum. It was a criticism Jourdain pursued in an 1880 screed, *L'École sans Dieu*, which lambasted the laicization of education.¹²¹ Religious instruction was not only necessary to establish the foundations of metaphysics and ethics, Jourdain's manual argued it also elevated philosophy above the natural sciences. In contrast to scientific spiritualists, who believed that philosophy ought to address particular problems broached by the sciences, Jourdain towed the Cousinian line, arguing that philosophy ought to establish the principles on which the sciences depend. Associationist psychologists abandoned this task, so the manual claimed in the history of philosophy section. Herbert Spencer and his disciples made students "relive this false and pernicious doctrine taught today in their work, with a talent worthy of a better cause."¹²² By 1888, the final edition of *Notions de philosophie* continued to promote Cousin's bygone spiritualism,

¹¹⁹ Charles Jourdain, *Notions de philosophie*, 9th ed. (Paris: Hachette, 1864), II.

¹²⁰ Charles Jourdain, *Notions de philosophie*, 17th ed. (Paris: Hachette, 1882), II.

¹²¹ Charles Jourdain, *L'École sans Dieu* (Paris: Jules Gervais, 1880).

¹²² Ibid., 465.

concluding that “whatever the new evolutions of philosophical systems, a point remains constant in our eyes: they will efface from man’s thought neither the certainty of the existence of the soul, a soul endowed with the liberty and responsibility for his acts, nor the certainty of the existence of God, a personal, creating and rewarding God.”¹²³ Jourdain’s long-enduring philosophy manual was a paradigmatic example of the fading yet tenacious influence of the old spiritualism over the classroom.

Georges Fonsegrive’s *Eléments de philosophie* offers a striking contrast. Written following the 1885 reform on the basis of notes composed while a professor at Lycée Buffon, Fonsegrive dedicated his manual exclusively to psychology.¹²⁴ Each lesson began with a summary of key concepts and was followed by a résumé. At the conclusion of each lesson, Fonsegrive included a list of suggested reading, frequently citing recently published literature, and even the experimental research conducted at the École pratique des hautes études, opened in 1889.¹²⁵ The manual was groundbreaking in that it featured contemporary psychological research at the same time as it gave significant consideration to the history of metaphysics.

Eléments de philosophie was organized into two sections: affective psychology and reflexive psychology. Its organization flouted the *programme*. Fonsegrive justified his approach by appealing to the normative division of labor between philosophical and physiological psychology in then-contemporary psychological literature. Affective psychology, he claimed, studied unconscious phenomena not attributable to the self

¹²³ Charles Jourdain, *Notions de philosophie*, 18th ed. (Paris: Hachette, 1888), 476.

¹²⁴ Fonsegrive went on to publish a complementary manual that addressed the rest of the *programme*: *Eléments de philosophie. II. Logique, métaphysique, morale, histoire de la philosophie, dissertations philosophiques* (Paris: Alcide Picard et Kaan, 1892).

¹²⁵ Georges L.- Fonsegrive, *Eléments de philosophie. I. Psychologie* (Paris: Alcide Picard et Kaan, 1891), 28.

[*moi*]. The section offered an extensive survey of research pertaining to the nervous system and perception, as well as to the structure of the brain. Reflexive psychology, which Fonsegrive presented as “far more interesting than the former,” pertained to conscious phenomena inhering in the self.¹²⁶ The section featured the conceptual problems of consciousness left unresolved by experimentation: for example, the composition of images, the structure of conscious activity, attention and its relations to muscular states, maladies of memory, and the formation of sensorial atlases. In accord with scientific spiritualists shared influence, Fonsegrive cited Maine de Biran, and not Cousin, as the motivation for the manual’s organization.¹²⁷

Fonsegrive, like Jourdain, was a Catholic indebted to the spiritualist tradition. Yet Fonsegrive’s studies at the École normale under Émile Boutroux propelled him to seek a rapprochement between religious and scientific thought. In his dissertation, *Essai sur le libre arbitre* (1887), Fonsegrive argued that determinism and free will are compatible. The laws of the natural sciences are products of humans’ free will, he claimed, echoing Boutroux’s thesis in *De la contingence de la nature* (1874).¹²⁸ Fonsegrive’s manual conveyed his philosophical commitment to reconciling science and metaphysics: “It does not seem impossible to adopt these results, all the while remaining faithful to the doctrinal traditions precious to the University.”¹²⁹ By placing science in dialogue with the history of Western philosophy, *Éléments de philosophie*, according to one reviewer, left “little in the way of bringing together the theories of modern psychology, as they are

¹²⁶ Ibid., 22.

¹²⁷ Ibid., 5.

¹²⁸ Georges L.-Fonsegrive, *Essai sur le libre arbitre* (Paris: Félix Alcan, 1887), 516.

¹²⁹ Georges L.-Fonsegrive, *Éléments de philosophie*, 5.

represented by the authors that everyone knows.”¹³⁰ After the manual found success, Fonsegrive dedicated his career to bringing psychological advancements to bear on his Catholic faith.¹³¹

Bridging religious and rational principles was a politically volatile affair. The laicizing reform of 1882 sparked a war over the manuals used in primary school. Primary school students learned about rational morality directly through civics manuals, which Ferry promoted as a pedagogical vehicle of his reforms. The manuals were written by philosophy professors and often patterned after the ethics section of the *lycée* philosophy course. The lessons were on practical subjects such as military service, the *patrie*, taxes, justice, the law, government, and the administration of liberty, equality, and fraternity. On December 15, 1882, the Papal congregation of the index under Leo XIII condemned four of the manuals.¹³² Paul Bert, who briefly served as Minister of Public Instruction in 1881, especially drew the ire of the Catholic Church for having concluded his militantly Republican manual with the lines, “All cry out: live the Republic!”¹³³

The blacklisting spurred a confrontation in parliament, with competing conceptions of French spiritualism again at stake. On June 1, 1883, Senator Duc de Broglie, representing the Right, denounced the manuals before Parliament. Claiming that since Ferry had used them to attack Catholics, the manuals violated the Republic’s commitment to religious neutrality. Interestingly, de Broglie inveighed against manuals

¹³⁰ Bernard Perez, “*Eléments de philosophie, I, Psychologie* par G.-L. Fonsegrive,” *Revue philosophique* T. 33 (1892): 83.

¹³¹ See Georges L-Fonsegrive, *L’Attitude du catholique devant la science*, 2nd ed. (Paris: Librairie Bloud et Barral, 1900); *Le Catholicisme et la vie de l’esprit* (Paris: Victor Lecoffre, 1899).

¹³² The blacklisted manuals were, Paul Bert, *L’instruction civique à l’école* (Paris: Picard-Bernheim, 1882); Gabriel Compayré, *Éléments d’éducation morale et civique* (Paris: P. Garcet, 1880); Jules Steeg, *Instruction morale et civique: l’homme et le citoyen* (Paris: N. Fauvé et F. Nathan, 1882); Mme. Henry Gréville, *L’instruction morale et civique des jeunes filles* (Paris: Paris: E. Weill and G. Maurice, 1882).

¹³³ Paul Bert, *L’instruction civique à l’école* (Paris : Picard-Bernheim, 1882), 162.

written by spiritualists who invoked an abstract concept of God: “The place made in the *programme* for duty to the divine was made by convenience rather than by true conviction... God is there, it seems, as a provisional title.”¹³⁴ Ferry defended the manuals by returning to a basic distinction of Republican *laïcité*: “We have promised religious neutrality; but we have not promised philosophical neutrality any more than political neutrality.”¹³⁵ A laic curriculum, in other words, did not preclude the state from promoting a positive moral program. In the debate, Ferry again turned to spiritualists’ manuals in order to cultivate secular students. Of the some forty civics manuals used among primary schools, Ferry declaimed, “All are founded on pure morals, on Platonic morals, on the morals that were the object of research by all the great philosophical schools since antiquity, on the morals that are called spiritualist or deist, which we call, ourselves, simply the morals of duty and sacrifice.”¹³⁶ Émile Boutroux, committed to Catholicism as much as science, saw no anti-religious animus in the civics and morals manuals. In fact, he suggested, “Without a doubt, today the great majority of France is deist in a conscious or unconscious manner.”¹³⁷ While some of the manuals promoted Catholic doctrine, and others abstained, the majority drew on the history of spiritualism, Boutroux claimed, to instill an upright conscience in students.

The clash of manuals culminated in the letter that Ferry sent to instructors November 17, 1883. Seeking to dampen the flames between Catholics and Republicans, the letter clarified the distinction between families’ and churches’ responsibility over

¹³⁴ “Séance de 1er Juin, 1883,” *Journal officiel de la république française, Débats parlementaires, Sénat* (Paris: Bibliothèque de Sénat, 1880-1940): 596.

¹³⁵ Jules Ferry, *Discours et opinions de Jules Ferry* T. 4, ed. Paul Robiquet (Paris: Armand Colin: 1896), 353.

¹³⁶ *Ibid.*, 361.

¹³⁷ Émile Boutroux, “Les récents manuels de morale et d’instruction civique,” *Revue pédagogique* T. 3 (1883): 297.

religious instruction, and the state's responsibility over moral instruction. Official morality, according to Ferry, consisted in "this good and ancient morality that we have received from our fathers and which we are all honored to follow in its relations to life, without troubling us to discuss its philosophical bases."¹³⁸ While Ferry identified antiquity as the source of the principles of primary school philosophy manuals, those used in the terminal course were unequivocally modern.

Critique and Instruction in Philosophy Education

In the face of educational upheavals between 1874 and 1907 under the Third Republic, philosophers were unified in their collective anxiety over the declining status of their discipline. Yet, as the terminal philosophy course lost ground with respect to the ascending emphasis on scientific instruction, a scientifically revamped philosophy curriculum laid the conditions for a pedagogical rapprochement between philosophical and scientific instruction. Far from reducing the study of consciousness to physiological methods, the close proximity between metaphysical and biological concepts in the *programme* occasioned a thoroughgoing critique of reductionism by thinkers committed to updating French spiritualism on the basis of science.

Alfred Fouillée forcefully gave voice to this critical stance in several writings on secondary education. On the one hand, the fragmentation of the philosophy curriculum and its widening distance from science courses threatened to lead students into uncritical, reductive thinking. "If you eliminate all of these [philosophical] questions, you commit the future men of science and the future doctors to a nearly certain materialism or to a

¹³⁸ Jules Ferry, *Discours et Opinions de Jules Ferry* T. 4, 360.

blind religiosity... Habituated to affirming the facts of positive knowledge, they will become negative toward all that does not admit of mathematical or physical certitude.”¹³⁹

On the other hand, Fouillée found an antidote in philosophy’s purchase over scientific psychology in the official curriculum. Echoing the strategy of Janet’s psychology manual, which incorporated physiological data to critique physiological methods, Fouillée affirmed that it was in the classroom where philosophy professors could resist biological reductionism head on. Fouillée posited the task as part of a broader project of national regeneration aimed at overcoming the instrumentalization of knowledge in the hands of “practitioners without ideas, specialists without general views,”¹⁴⁰ on the basis of three philosophical principles that he deemed critical to education: “The general critique of science and its conditions, the particular critique of materialism, and finally the possibility of a legitimacy of an idealism compatible with our knowledge of nature.”¹⁴¹

In critically engaging scientific research, philosophy professors simultaneously saw themselves as carrying out the Republican project of cultivating active and rational citizens. As Jean-Marie Guyau, Fouillée’s adopted son, argued in *Éducation et hérédité* (1889), scientific instruction risked lulling students into passivity without the corrective of philosophy instruction to galvanize their minds. Guyau contended that research on the nervous system showed that education could be mobilized to develop new habits to raise the human species above its heredity. “The best education,” according to Guyau, “is that which is not simply *instructive*, but *suggestive* and consequently *directive*, that which introduces in the brain, not only knowledge susceptible to “double usage” as Socrates

¹³⁹ Alfred Fouillée, *L’Enseignement au point de vue national*, 336.

¹⁴⁰ Ibid., 58.

¹⁴¹ Ibid., 333-334.

said, but social feelings and habits of action allied to the habits of elevated thought.”¹⁴²

Guyau therefore posited a homology between philosophical inquiry and philosophical instruction: both took scientific facts as a point of departure, beyond which scientific methods give way to philosophical speculation.

Guyau, Fouillée, and a host of thinkers committed to renewing spiritualism from within experimental psychology found in the educational reforms of the Third Republic a pedagogical platform for their ideas. Although philosophy ceased to enjoy its exalted status under Cousin’s regime, these thinkers steered the intellectual and cultural resonance of psychological research to defend the autonomy of consciousness and renew the pertinence of metaphysics. Bergson’s meteoric rise to the Collège de France, and the singular intellectual fame he achieved, was due in large part to his tireless engagement with the new psychology in the classroom. His *Essai* and *Matière et mémoire* were elevated above the work of his spiritualist peers because Bergson took advantage of the transformations in the official philosophy curriculum and in the role of *lycée* professors amidst the scientific reforms between 1874 and 1907 under the Third Republic.

¹⁴² Jean-Marie Guyau, *Éducation et hérédité* (Paris: Félix Alcan, 1889), 128.

Chapter 6: Édouard Le Roy, Maurice Blondel, and Catholic Modernism

The pragmatist moment in scientific spiritualism came to fruition amidst the cultural and intellectual upheavals in the Catholic Church at turn to the twentieth century. The Church, whose foothold in France diminished with the laic reforms of the Third Republic, could not remain impermeable to advancements in experimental psychology and evolutionary biology. These nascent sciences not only threatened the ethical basis of Catholic teachings, but also challenged the Church's role in public life, precipitating the modernist crisis within Catholicism. Catholic Modernism was a variegated and multi-national movement that erupted in the late nineteenth century as theologians sought to reconcile their faith with the demands of experimental science and a biological framework that exploded the Christian vision of time.¹ The Vatican, which censured the works of alleged modernists, officially condemned the movement in 1907 and sought to expel its proponents from the clergy. Although Catholic Modernism spread throughout Europe, scientific spiritualists in France – in particular, the philosophers Maurice Blondel and Édouard Le Roy – led the vanguard. Blondel and Le Roy revolutionized the Church's teachings by conceptualizing Catholic faith anew as a repertoire of practices, as opposed to an ensemble of theoretical beliefs. Although Blondel and Le Roy did not see eye to eye, the debate they opened within Catholicism, and in scriptural interpretation specifically, hinged on the philosophies of action they both formulated. Thus in

¹ In his November 18, 1893 encyclical, Pope Leo XIII acknowledged that evolutionary theory contradicted the Church's teaching that the Earth began 6,000 years ago: "Providentissimus Deus," *Papal Encyclicals Online*, <http://www.papalencyclicals.net/Leo13/113provi.htm> (accessed 1 Feb. 2014).

challenging Catholic orthodoxy, Blondel and LeRoy simultaneously brought the pragmatist moment in scientific spiritualism to its apex.

This chapter analyzes scientific spiritualists' engagement with religion through the prism of Blondel's and Le Roy's interventions in Catholic Modernism. My argument is that the modernist controversy set the stage for Blondel and Le Roy to formulate a pragmatist account of conscious activity, and further, that the wide-ranging debates in theological and philosophical circles over the implications of science for Catholic doctrine lent significance to this pragmatist moment in scientific spiritualism. At stake in these debates was the role of history in Catholicism. Is the Church a human institution that has transformed with the vicissitudes of history? And if so, is Catholic dogma subject to change, its meaning dependent on the exigencies of different epochs? Through their interventions in the debate over historicism, which tore at the roots of France's Catholic heritage and called the revealed truths of scripture into question, Blondel and Le Roy radicalized their respective philosophical engagements with experimental psychology and evolutionary biology. Historicism, understood as both an institutional and an interpretive principle, offered a conceptual framework, I am suggesting, for Blondel and Le Roy to demonstrate not only that conscious activity is practical activity, but moreover, that practical activity takes place in a shared social context, and not only, as it were, between the ears. Blondel and Le Roy thus brought about a new moment in scientific spiritualism by having transformed the psychological account of conscious activity, explored in the Parts I and II, into an inter-subjective account.

The modernist controversy occasioned as well as concealed the pragmatist moment. In their efforts to reconcile faith and modern science, Blondel and Le Roy

reconceptualized the practical orientation of both in a manner that drew the ire of the Vatican. Blondel first used the term “pragmatism” to characterize his philosophy of action: “I had proposed the name *pragmatisme* in 1888,” he reflected, “and I was aware of clearly devising it before I had ever encountered the word, which has since been employed in England, America, Germany and Belgium.”² Yet Blondel soon retracted the label to avoid the same fate of Le Roy,³ who provocatively avowed the pragmatist banner in the face of the Vatican’s condemnation of the movement’s alleged agnosticism.⁴ By 1907, Le Roy’s works were on the Vatican’s Index of banned books; while Blondel withdrew the re-editing of his own.⁵

The pragmatist moment in scientific spiritualism illuminates the inception of the notion well before William James declared it “A New Name for Some Old Ways of Thinking” in 1907.⁶ Bergson’s close relation to James, as well as the co-emergence of pragmatism in France and America, has been well documented.⁷ But the distinctly religious context of French pragmatism casts its difference from the Anglo-American variant into stark relief. Although James cited Blondel and Le Roy as influences,⁸ *pragmatisme*, for these two thinkers, had both a distinct meaning and intellectual heritage. Blondel and Le Roy construed knowledge as springboard for intervening in the

² Quoted in André Lalande, “Pragmatisme et pragmatisme,” *Revue philosophique* T. 61 (1906): 123.

³ Blondel notably refers to his prior pragmatism in “Lettre,” *Revue du clergé français* 29 (1902): 652.

⁴ Édouard Le Roy, *Dogme et critique* (Paris: Bloud & Cie, 1907), 86.

⁵ Oliva Blanchette recounts Blondel’s decision to not republish *L’Action* in *Maurice Blondel: A Philosophical Life* (Grand Rapids, MI: Eerdmans, 2010), 285-288.

⁶ William James, *Pragmatism: A New Name for Some Old Ways of Thinking* (New York: Longmans, Green, and co., 1907). Bergson wrote an introduction for the book’s French translation: William James, *Le Pragmatisme*, trans. E. Le Brun (Paris: Flammarion, 1911).

⁷ See *The Reception of Pragmatism & the Rise of Roman Catholic Modernism, 1890-1914*, ed. David G. Schultenover, S.J. (Washington, D.C.: The Catholic University of America Press, 2009); *France Bergson et James, cents ans après*, ed. Stéphane Madelrieux (Paris: Presses Universitaires de France, 2011), especially Paola Marrati, “James, Bergson et un univers en devenir,” 123-140; Larry McGrath, “Bergson Comes to America,” *Journal of the History of Ideas* 74, no. 4 (2013): 599-620.

⁸ William James, *Pragmatism*, viii.

world; and their account of pragmatism was part and parcel of their critique of intellectualism, the Kantian view that knowledge is a matter of judging our representations of the world – what John Dewey called the spectator theory of knowledge. But neither Blondel nor Le Roy posited utility as the sole criterion of truth; these thinkers instead sought to open a metaphysical – and even theological – dimension beyond the reach of scientific methods. Their appropriation of experimental psychology and evolutionary theory allied Blondel and Le Roy to scientific spiritualism; and their philosophy of action, moreover, set the principles of motility and contingency, both endemic to nineteenth-century French spiritualism, in a social and historical context.

Blondel and Le Roy equally brought the latent Catholicism of French spiritualism to the fore. Maine de Biran had dedicated his late writings to the supernatural;⁹ Félix Ravaisson drew on a Christian archive to articulate the “law of grace” central to *De l’habitude*; and Victor Cousin promoted a distinctly Catholic morality in the ethics section of the *lycée* philosophy *programme*.¹⁰ But Blondel and Le Roy went beyond these thinkers by conceptualizing the very possibility of Catholicism from within the natural and human sciences. Neither thinker, to be sure, argued that religion is tantamount to science. These thinkers, as one critic wrote in 1903, reunited the realms of science and faith torn apart by Kant’s critical philosophy: “[S]ince Kant, the critique has taken a half-turn. Kant assured the objectivity of science by renouncing knowledge of absolute reality. The New Critique sacrifices the objectivity of science to authorize metaphysics access to

⁹ Biran’s oeuvre has been categorized into three stages: sensationalist, stoic, and mystic or religious. See Henri Gouhier, *Les Conversions de Maine de Biran* (Paris: Vrin, 1947); Georges Le Roy, *L’Expérience de l’effort et de la grâce chez Maine de Biran* (Paris: Boivin, 1937).

¹⁰ Ethics lessons in the 1832 *programme* included “The principle attributes of God; divine Providence, and the plan of the universe,” and “Religious ethics, or duties to God.” Victor Cousin, *Défense de l’Université* 3rd ed. (Paris: Joubert, 1844), 362.

the noumenon.”¹¹ While the author criticized the “New Critique” for having originated in the religious convictions of French spiritualism, it was in fact spiritualists’ appropriation of the sciences, Le Roy insisted, that offered them a *point d’appui* to bring theology into the orbit of philosophy and science.¹² Yet in so doing, Le Roy as well as Blondel opened scientific spiritualism to reproach by secular critics intent on purifying scientific inquiry of religious residue, as well as by Catholic critics committed to maintaining their faith’s independence from the natural order.

Blondel and Le Roy belonged to a new generation of scientific spiritualists determined to delve into the tumultuous debate over religion – a debate from which an older generation demurred. Blondel was a student of Émile Boutroux, himself a committed though circumspect Catholic. Boutroux’s faith did leave a legible mark on his critique of mechanistic science in *De la contingence des lois de la nature*, intent as he was to ground the possibility of miracles in a natural world imbued with contingency.¹³ Despite his unwillingness to make Catholicism an explicit theme of his philosophical writing amidst the anti-clerical politics of the Third Republic, Boutroux counseled the young Blondel, while he was preparing to sit the *agrégation* as a student at the École normale supérieure: “I still believe that to please jury, you needn’t sacrifice any of your convictions; you can and should remain yourself.”¹⁴ Blondel was also a student of Léon Ollé-Laprune, the Catholic philosopher at the École normale whose *De la certitude*

¹¹ M. Cantecor, “La Philosophie nouvelle et la vie de l’esprit,” *Revue philosophique* T. 28 (1903): 255.

¹² Le Roy’s margin notes in his personal copy of Cantecor’s article state his disagreement with the author, “I don’t believe the inspirations behind neo-postivism [the name Le Roy gave to his thought] had ever cited the philosophers of faith...As far as what concerns me, I’ll permit myself to declare that this philosophical research proceeded before all from an act of the interior life.” INA1.1, Fonds Édouard Le Roy, Archives de l’Institut Catholique de Paris.

¹³ See Joel Revill, “Émile Boutroux, Redefining Science and Faith in the Third Republic,” *Modern Intellectual History* 6, no. 3 (2009): 485-512.

¹⁴ Émile Boutroux, letter to Maurice Blondel, 16 Jul. 1884, CIV.81, Fonds Maurice Blondel, Archives de l’Université Catholique de Louvain, Louvain-La-Neuve, Belgium.

morale (1880) defended the central role of the will in matters of faith. Yet, it was in large part thanks to their student's explicit treatment of religion as a philosophical problem, that later in life, Boutroux and Ollé-Laprune, would more confidently throw their Catholicism into the limelight.¹⁵ Under their tutelage, Blondel wrote his groundbreaking thesis, *L'Action* (1893), which rejuvenated the philosophy of action, long disregarded in favor of psychology and metaphysics, and boldly resuscitated religion as a problem central to French spiritualism.

Le Roy was a student of Bergson and an outspoken exponent of his thought in works such as *Une philosophie nouvelle: Henri Bergson* (1913). Le Roy saw himself as advancing the scientific underpinnings of *Bergsonisme*, especially for the sake of the Catholic community. He was originally trained as a mathematician under Henri Poincaré, whose conventionalism furnished Le Roy with the intellectual stimulus for his pragmatism. Poincaré argued that scientific propositions do not apply to natural phenomena absolutely, but instead constitute conventions facilitating experimentation.¹⁶ According to conventionalism, the test of scientific propositions' validity turns on their value for describing and manipulating facts in respect to competing propositions. Le Roy synthesized Poincaré's conventionalism with Bergson's account of consciousness in a series of essays, "Science et philosophie." (1899). The essays launched Le Roy's career, beginning with the post at the Collège de France that he took over from Bergson as an assistant instructor from 1913 to 1920, before assuming the chair of modern philosophy from 1921 to 1941.

¹⁵ See Émile Boutroux, *Science et religion dans la philosophie contemporaine* (Paris: Ernest Flammarion, 1908); Léon Ollé-Laprune, *La vitalité chrétienne* (Paris: Perrin et Cie, 1901).

¹⁶ Henri Poincaré's early essays were formidable on the young Le Roy: "Les géométries non euclidiennes," *Revue générale des sciences pures et appliquées* 2 (1891): 769-774; "L'espace et la géométrie," *Revue de Métaphysique et de Morale* 6 (1895): 631-646.

In what follows, I trace the development of Blondel's and Le Roy's thought from their early philosophical works, *L'Action* and "Science et philosophie" respectively, to their interventions in the modernist controversy. Their debate over the relevance of science to pragmatism, and in turn, the salience of pragmatism for Catholicism, shines a light on both the cultural resonance of the emergent natural and human sciences across Catholicism and the intellectual development of pragmatism as a coherent commitment of scientific spiritualism at the turn of the twentieth century.

The Modernist Controversy in France

Resistance to Church orthodoxy had been brewing in the late nineteenth century. At the First Vatican Council of 1869 to 1870, Pope Pius IX tackled the rising tide of what he labeled rationalism and liberalism. In the face of the Church's diminishing authority, precipitated by the democratic upheaval of the Third Republic and the unification of Germany, Pius IX reasserted the Vatican's role in Europe at the close of the council with the doctrinal constitution, *Pastor Aeternus*, which enshrined Papal infallibility. Pope Leo XIII, who claimed the pontificate in 1878, subsequently sewed the seeds of the modernist turn, as Alec Vidler suggests: "His whole policy, specially after the extravagant conservatism of Pius IX, was calculated to create a psychological atmosphere which conveyed the impression that after all Catholicism was capable of fresh orientation, of coming to terms with political democracy and with modern knowledge."¹⁷ Leo XIII was a firm promoter of education; he opened the Vatican archives to church laity and

¹⁷ Alec Vidler, *The Modernist Movement in the Roman Church* (London: Cambridge University Press, 1934), 63.

protestants alike. Yet he also brought attention to the menace of modernism in his encyclical of November 18, 1893, *Providentissimus Deus* ["On the Study of Holy Scripture"]. Therein Leo XIII cast suspicion over the theory of evolution and criticized modernists' efforts to integrate evolution into biblical hermeneutics. What followed was the creation of the Pontifical Biblical Commission in 1902, a body of three Cardinals and twelve Consultors who advised the Pope on matters of scriptural interpretation. In the subsequent years, the commission sent a mushrooming number of works penned by alleged modernists to the Vatican's index of banned books.

The height of the modernist controversy lasted from 1902 to 1907. Alfred Loisy ignited the spark with the publication of his *L'Évangile et l'Église* (1902). The ordained pastor argued that the Catholic Church had developed since the time of Jesus within and alongside human history. Loisy wrote the book in response to Adolf von Harnack's *Das Wesen des Christentums* (1900), which argued that the essence of the gospels consist of faith in God the Father. Harnack proposed an analytic method to distill the superfluous elements of Jesus' ministry and arrive at its core. "This method of dismembering a subject," Loisy argued, "does not belong to history, which is a science of observation of the living, not of dissection of the dead."¹⁸ Loisy's historical method, by contrast, did not construe the gospels as Christ's immediate revelation, but as documents written during the Church's early development. Biblical criticism, Loisy held, ought to grasp the vital principle motivating Christian history, which was not exhausted at its origin. "The gospel," he claimed, is "a living faith, concrete and complex, whose evolution proceeds without doubt from the internal force which has made it enduring, but none the less has

¹⁸ Alfred Loisy, *The Gospel and the Church*, trans. Christopher Home (New York: Charles Scribner's Sons, 1904), 19, originally published as *L'Évangile et l'Église* (Paris: Belleuve, 1902).

been, in everything and from the beginning, influenced by the surroundings wherein the faith was born and has since developed.”¹⁹ The claim entailed Loisy’s further belief that the historical Jesus was distinct from the stories of Christ, and that Jesus’ teachings only found meaning after his time on earth. The explanatory purchase of Loisy’s method was to reconcile contradictory elements of scripture, particularly chronological inconsistencies found, for example, in the gospel of John, which recounts Jesus performing miracles in Jerusalem during different Passovers.²⁰ Loisy argued that historical distance was required to interpret Jesus’ teaching properly: “The glory of the risen Lord threw new light on the memories of His earthly career.”²¹ The significance of the gospels, moreover, depended on their adaptation to the exigencies that the Church faced in different historical periods. The very lifeblood of the Church was therefore subject to mutation. Following the Church’s initial condemnation of Loisy’s historicist approach in 1902, he further defended his “little book” the next year in *Autour d’un petit livre*.

Loisy was not the first to separate the historical Jesus from Christ. Ernest Renan advanced the blasphemous claim in his *Vie de Jésus* (1863). Renan argued that Jesus, born a Jew, cleansed himself of Judaic traces in becoming Christian. And the Irish Jesuit George Tyrrell also dedicated his corpus to exploring the historical transformations of Christianity. But Loisy ignited a storm in Catholic France not only because of the force of his arguments, but also because of the prominent positions from which he leveled them. Loisy began his scholarly career at the newly opened Institut Catholique de Paris, before

¹⁹ Ibid., 87.

²⁰ See John 2:13 and John 6:4.

²¹ Alfred Loisy, *The Gospel and the Church*, 38.

being dismissed in 1893 after teaching seminars on the historical lives of Saints.²² Loisy took a subsequent position at the École des hautes études where he synthesized his historical method, and garnered the Vatican's disdain for having catalyzed Catholic Modernism.

The modernist crisis in the Catholic Church reached an apex in 1907 when the Vatican condemned the movement in a series of formal statements. On April 17, Pope Pius X released an allocution vilifying modernism. Soon after, on July 3, he signed off on the Holy Office's encyclical, *Lamentabili Sane Exitu* ["With Truly Lamentable Results"]. *Lamentabili* featured a list of sixty-five heresies of modernism. Loisy was the clear though unacknowledged target. Instead of reading the Bible as a series of factual propositions, modernists, according to *Lamentabili*, treated the Bible as an archive of human authors' beliefs formulated at the time of its writing. The Vatican targeted the claims that "the exegete must first put aside all preconceived opinions about the supernatural origin of Sacred Scripture and interpret the [the Bible] in the same way as another merely human document;"²³ and that "Like human society, Christian society is subject to a perpetual evolution."²⁴ In addition to having illuminated modernists' biblical hermeneutics, the Vatican also shone a light on the modernists' embrace of scientific developments. Pius X condemned the belief that "Since the deposit of Faith contains only revealed truths, the Church has no right to pass judgment on the human sciences."²⁵

²² See Marvin R. O'Connell, *Critics on Trial. An Introduction to the Catholic Modernist Crisis*. (Washington, D.C.: The Catholic University of America Press, 1994).

²³ Pope Pius X, "Lamentabili Sane Exitu (3 July 1907)," *Papal Encyclicals Online*, <http://www.papalencyclicals.net/Pius10/p10lamen.htm> (accessed 1 Feb. 2014).

²⁴ Ibid.

²⁵ Ibid.

The Vatican's condemnation of Catholic Modernism came amidst the Church's waning authority. In 1905, French parliament passed the law separating church and state, which the Vatican received as the final blow of the Third Republic's anti-clericalism. The government's decision not to support religious cults, whether economically or socially, stoked the flames of the controversy. On September 8, 1907, Pius X brought the full weight of the Vatican's authority down upon "these very Modernists who pose as Doctors of the Church, who puff out their cheeks when they speak of modern philosophy,"²⁶ in the encyclical, *Pascendi Dominici Gregis* ["Feeding the Lord's Flock"]. The modernists' central commitment, *Pascendi* stipulated, was to the doctrine of evolution, or what Pius X characterized as the principle of "vital immanence": "that religious formulas, to be really religious and not merely theological speculations, ought to be living and to live the life of the religious sentiment."²⁷ The history of the Church, according to the doctrine, is divided between *real* history, organized according to the chronological sequence of human actions, and *internal* history, which exists in the pious meditations of believers. Whereas the former follows a linear sequence, the latter inheres in an trans-historical impulse adapted to the socio-cultural demands of particular eras. The division between two strata of history paralleled Le Roy's and Blondel's division between two dimensions of consciousness: intelligence and experience (or what Loisy called "sentiment"). Religious beliefs, according to their division, exceed the believers' intellectual knowledge of church doctrine, and overflows in the practical experience animating devotional practices. The Vatican responded in the name of scholasticism by denouncing the critique of intellectualism. "[W]hat does this *experience* add to

²⁶ Pope Pius X, "Pascendi Dominici Gregis (8 Sept. 1907)," *Papal Encyclicals Online*. <http://www.papalencyclicals.net/Pius10/p10pasce.htm> (accessed 1 Feb. 2014).

²⁷ Ibid.

sentiment?” Pius X rebuked, “Absolutely nothing beyond a certain intensity and a proportionate deepening of the conviction of the reality of the object. But these two will never make sentiment into anything but sentiment, nor deprive it of its characteristic which is to cause deception when the intelligence is not there to guide it; on the contrary, they but confirm and aggravate this characteristic, for the more intense sentiment is the more it is sentimental.”²⁸ *Pascendi* concluded with a series of concrete initiatives designed to weed out modernist influences within the Church, including expelling modernists from seminaries and universities, none more notable than Loisy, who was excommunicated March 7, 1908. “In the excommunication which thus set me free,” Loisy wrote in his autobiography, “I found but a single defect; it arrived twenty years too late!”²⁹ Loisy, however, was not alone. The Vatican censored troves of modernists. Pius X buttressed his encyclical three years later with the anti-modernist oath. From its debut September 1, 1910, the oath enjoined all clergy to submit to the condemnations contained in *Lamentabili* and *Pascendi*, which lasted until Pope Paul VI rescinded the oath in 1967 following the Second Vatican Council.

The Vatican’s official statements of 1907 both condemned and constituted Catholic Modernism. Until *Lamentabili* and *Pascendi*, the movement hardly existed. It consisted of dispersed claims made by radical theologians whose commitments had yet to be consolidated. By composing a syllabus of modernists’ sixty-five tenets and by criticizing their claims head-on, the Vatican lent an identity to the movement that it had previously lacked. Yet it was an identity that proved to be self-contradictory. “The consequences of *Pascendi* were devastating,” Roger D. Haight affirms, “at once there

²⁸ Ibid.

²⁹ Alfred Loisy, *My Duel With the Vatican*, trans. Richard Wilson Boynton (New York: E.P. Dutton & Company, 1924), 319, originally published as *Choses passées* (Paris: Émile Nourry, 1913).

were no single “Modernists” who recognized their positions integrally represented in that document, and yet the “Modernists” were everywhere.”³⁰ “Modernism” was thus a negative identity, a pejorative the Church ascribed to certain thinkers, rather than a theological commitment embraced by its advocates. Nonetheless, Catholic Modernism continues to signify the crisis breached within the history of Roman Catholicism at the debut of the twentieth century.

Maurice Blondel’s Philosophy of Action

Blondel was born in Dijon on November 2, 1861 into a bourgeois Catholic family. He initially entered the Université de Dijon in 1878 to complete a degree in science and law, but, driven by his true passion, he transferred to the École normale supérieure at the age of twenty to study philosophy. Blondel entered in 1881, just missing Bergson, who departed the previous year.³¹ Like Bergson, Blondel was thrown into an academic milieu where the sciences garnered mounting prestige. But as a devout Catholic, Blondel found the École normale stifling. Catholicism, although a private conviction among many students and faculty alike, was seen as an opprobrious philosophical position to take in the classroom. As a result, Blondel committed his early scholarship to exclusively scientific problems. He published his first article in the *Revue philosophique*, a study of the problems attending the perception of stars viewed on the

³⁰ Roger D. Haight, “The Unfolding of Modernism in France: Blondel, Laberthonnière, Le Roy,” *Theological Studies* 35 (1974): 633.

³¹ Biographical details found in Oliva Blanchette, *Maurice Blondel*, 32-42.

horizon.³² Blondel observed that stars appear larger on the horizon than they do when seen directly above in the night sky. He leaned on Boutroux's account of contingency to argue that astronomy is inflected by the errors of human observation as well as by the instability of celestial illumination. Blondel's argument was prescient for having articulated, in an inchoate manner, the relativity of light and gravitation that Albert Einstein later theorized. In fact, a British astronomical expedition to Africa in 1919 verified Blondel's claim.³³ Photographs of a solar eclipse showed that light is affected by the earth's gravitational pull and thus acts like any other mass. "I find your work very interesting and ingenious," Boutroux wrote, "and I'll send it to Mr. Ribot, asking him – which I'm sure is unnecessary – to welcome it for his journal."³⁴ But Blondel sought to go beyond his scientific spiritualist peers. The experimental sciences provided conceptual fodder for not only philosophical problems, Blondel believed, but religious problems as well. "'Christian philosophy' does not exist any more than Christian physics," Blondel went on to argue in his thesis, "philosophy, that is to say, is applicable to Christianity in so far as Christianity exercises, in the last analysis, control and judgment even over men who are ignorant of it or reject it."³⁵

Blondel's primary aim in *L'Action* was to demonstrate that scientific knowledge in its broadest sense, from the *sciences durs* to the *sciences humaines*, depends upon a theological foundation. What made the thesis groundbreaking in 1893 was that Blondel's

³² Maurice Blondel, "Une association inséparable: l'agrandissement des astres à l'horizon," *Revue philosophique* T. 26 (1888): 489-497.

³³ Adam C. English "'Science Cannot Stop With Science': Maurice Blondel and the Sciences," *Journal of the History of Ideas* 69, no. 2 (2008): 272.

³⁴ Émile Boutroux, letter to Maurice Blondel, 17 Jul. 1888, CIV.80, Fonds Maurice Blondel, Archives de l'Université Catholique de Louvain.

³⁵ Maurice Blondel, *Action (1893): Essay on a Critique of Life and a Science of Practice*, trans. Oliva Banchette (Notre Dame, IN: University of Notre Dame Press, 1984), 165, originally published as *L'Action: Essai d'une critique de la vie et d'une science de la pratique* (Paris: Félix Alcan, 1893).

demonstration was philosophical, not theological, and proceeded by deriving the theological ground of scientific inquiry from within the sciences themselves. In opposition to Christian thinkers who preserved the theological outside the scientific by cordoning off the explanatory limits of each domain, Blondel argued that scientific inquiry engenders conceptual problems that demand a theological resolution. But theology, Blondel believed, was not limited to the otherworldly; it suffuses conscious activity, the very activity that makes scientific knowledge possible.

Blondel's secondary aim was to expand what counts as conscious activity beyond the narrow confines of human psychology. The subtitle of the thesis, *Essai d'une critique de la vie et d'une science de la pratique* [*Essay on a Critique of Life and a Science of Practice*], indicates that Blondel conceived action as the totality of life, including consciousness; hence the problem he broached on the first page, "Yes or no, does human life make sense and does man have a destiny?"³⁶ The problem set in motion a dialectic between the requirements of knowledge and the impulsion of the will. At first, action exceeds my thought. I find it impossible to explain the necessity of acting. "If I try to evade decisive initiatives, I am enslaved for not having acted. If I go ahead, I am subjugated to what I have done." But the impasse broached in thought dissolves before the will. "In practice, no one eludes the problem of practice; and not only does each one raise it, but each, in his own way, inevitably resolves it."³⁷ I go on acting despite my initial inability to answer the problem, why must I act? This problem traverses the entirety of *L'Action*. And by the end of his thesis, Blondel demonstrated that the two

³⁶ Maurice Blondel, *Action*, 3.

³⁷ *Ibid.*, 5.

horns of the problem, thinking and willing, find their seamless harmony in the theological.

The guiding problem of *L'Action* may have foreshadowed French existentialism, but Blondel drew its stakes from scientific spiritualists' critique of the reductionism of the emergent natural and human sciences.³⁸ While scientific spiritualists carved out a domain of freedom both in excess of the mechanistic worldview and beyond the intellectual dimension of consciousness, Blondel justified the necessity of action, that is, the determination of human creatures to be free, from within the sciences. "For to show that what is transcendent and strange to...the positive sciences is the very thing that makes them possible and applicable will be to bring to light what, in science itself, requires that science be surpassed."³⁹ Blondel proceeded, first, by demonstrating the theoretical discontinuities of the sciences, which scientific methodologies alone are unable to suture, and second, by revealing the resolution of these discontinuities in action. He therefore showed, "The positive sciences are not sufficient for us, because they are not self-sufficient," in order to elevate a philosophical science of action alongside the positive sciences of nature.⁴⁰

The first discontinuity that Blondel diagnosed holds between what he called the qualitative and representative dimensions of sensory experience. The qualitative

³⁸ My argument that Blondel's thought, especially in *L'Action*, developed as part of scientific spiritualism is contested in the literature. Michael Conway affirms, "Blondel drew fundamentally on principles developed and expounded by the spiritual positivists in their able criticism of both mechanistic materialism and an evolutionary idealism that was emerging from across the Rhine." "Maurice Blondel on the Structures of Science within a Positive Phenomenology," *Irish Theological Quarterly* 69 (2004): 380. Jean Leclercq, to the contrary, argues, "One cannot truly affirm that he claims an affiliation with this 'wave,' even if spiritualism affirms that man is capable, by his intelligence and by his will, of freeing himself from natural necessity, thanks to a progressive conquest over himself." "La Logique de la vie. Lectures du 'jeune' Maurice Blondel (1881-1893)," Vol. 2 (PhD diss., Université Catholique de Louvain, 2002), 23.

³⁹ Maurice Blondel, *Action*, 65.

⁴⁰ Ibid.

dimension belongs to scientific researchers' personal and singular interactions with phenomena – that is, the distinct experience one has in the laboratory. The representative dimension belongs to the properly scientific character of phenomena as they are communicated among researchers in the form of symbols. The two dimensions, Blondel insisted, cannot be isolated and separated from each other. They are fundamentally intertwined as two aspects of the same scientific labor. As Michael Conway argues, Blondel drew a phenomenological, rather than ontological, division between the qualitative and representative dimensions, which meant that they amount to composite aspects of scientific methodology.⁴¹ Blondel's phenomenological method, which he pursued throughout *L'Action*, disentangled the overlapping tendencies otherwise taken for granted as unitary in the sciences.

The second and principal discontinuity that Blondel diagnosed holds between the mathematical (or exact) sciences and the experimental sciences. The mathematical sciences, inaugurated in the geometry of antiquity, depend on the mind's autonomous constructions, and thus belong to an ideal realm independent of the natural world. The experimental sciences, developed in the Enlightenment following Descartes' and Newton's laws of motion, depend on the observation of nature. Blondel cut the methodological distinction between the two along the lines of analysis and synthesis. Whereas the mathematical sciences analyze a whole in terms of its quantitative parts, the experimental sciences synthesize wholes by selecting among their elements. Herein lies the difference, for example, between drawing three angles subtending a circle to deduce the interior degrees of a triangle, and, on the other hand, identifying chemical substances

⁴¹ Michael Conway, *The Science of Life: Maurice Blondel's Philosophy of Action and the Scientific Method* (New York: Peter Lang, 2000).

by means of analogy and verisimilitude. Boutroux immediately recognized the importance of the distinction: “These analyses are incredibly thorough and very penetrating,” he wrote in a review of Blondel’s manuscript, “certain questions, such as those addressing the relations between the mathematical and experimental sciences, are dealt with in a truly new and instructive fashion.”⁴² Blondel demonstrated that the mathematical and experimental sciences correspond to two distinct orders of scientific methodology, which, despite their independence, mutually borrow from each other in scientific practice. The demonstration showed that their connection is an aporia, irresolvable in exclusively scientific terms.

The mathematical sciences borrow from experimental methods, most legibly in physics, which uses quantifiable models to explain concrete movements, such as the oscillation of a pendulum or the rebound of a ball. “[I]n spite of their ideal and detached character, the exact sciences have no reason for being and no possibility of existence unless, from the beginning, they implicitly tend to become what they are more and more, a substitute for experimental knowledge and an auxiliary of practical activity.”⁴³ Indeed, the mathematical sciences, which develop their models in abstraction from concrete movement, cannot in turn account for their attachment to reality.

The experimental sciences reciprocally borrow from mathematical methods. Chemistry, for example, borrows analytic procedures to arrange the numerical relations of molecules, as well as the laws of proportion. At the time, Dimitri Mendeleev’s standardization of the periodic table in 1869 was the most significant adaptation of mathematic precision to the study of natural entities. Yet, Blondel argued that the

⁴² Émile Boutroux, “Rapport au Doyen de la Faculté des Lettres de Paris” (July 27, 1892), in Maurice Blondel, *Lettres philosophiques* (Paris: Aubier, 1961), 21.

⁴³ Maurice Blondel, *Action*, 66.

experimental sciences depend on mathematic methods in an even more profound way. Instead of taking their starting point from the concrete given, the experimental sciences necessarily abstract from the singularities of nature. The chemist must establish his or her distance in order to identify a molecule as a unity. Abstraction, which at first blush seems peculiar to the mathematical sciences, turns out to be the condition on which the experimental sciences impart coherence to natural phenomena. “Water is water and nothing else, it is not oxygen or hydrogen.”⁴⁴ Blondel’s point was not that chemical symbols are false, but rather, that the unities determined by the experimental sciences are not absolutely true. What matters is that scientific symbols sufficiently isolate natural phenomena in order to submit them to mathematical measurement.

Evolutionary biology, by far the most advanced of the experimental sciences of the late nineteenth century, evinces the most pronounced integration of mathematical principles. Blondel argued that the evolutionary biologist makes use of analogies in order to establish continuity between an existing species and the anterior species from which it had diverged. Yet the evolutionary biologist, who Blondel likened to an alchemist, depends on an artifice to render the continuity between divergent species coherent. Just as the alchemist strives to transform ordinary materials into a greater composite, the evolutionary biologist assumes that life moves by a succinct progression toward a higher goal. Blondel, however, argued that the biologist has no right to do so on the basis of experimental methods alone, since the transition between species is never observed. In place of observation, the biologist borrows a model of continuity drawn from mathematical symbols, namely that of a mechanistic continuum, along which species divergences are arranged in linear fashion, progressing by creative leaps from the past to

⁴⁴ Ibid., 79.

the present. Blondel's critique of evolutionism targeted not simply the latent teleology of the science, but more incisively, the mathematical basis of its epistemological underpinnings.

The discontinuities between the mathematical and experimental sciences, Blondel argued, emerge from within the intellect – that is, at the level of methodology – yet they cannot be mended by the intellect. “Our power always goes further than our science, because our science, risen from our power, needs that power still to find in its support and its end.”⁴⁵ It is the will, and not the intellect, which settles these contradictions. The philosophical consequence Blondel drew is that scientific laws amount to conventions. As Adam C. English argues, Blondel supported a narrative basis of sciences. “His appeal to “the science of action” was not to establish a new foundationalism but to undercut late nineteenth-century scientific foundationalism by acknowledging that all sciences presuppose certain fictions.”⁴⁶ Scientific knowledge is therefore secondary to scientific practice, since it is the will that creates scientific conventions, and the intellect that in turn poses theoretical problems. As Blondel claimed, “The positive sciences are only the partial and subalternate expression of an activity that envelops, sustains, and overflows them.”⁴⁷ But far from condemning the sciences for being mere constructions, Blondel sought to afford the sciences a pragmatic imperative, and thus liberate them from the intellectual imperative to faithfully represent reality:

Thus are removed the shackles that once subjected the sciences to the fictitious necessity of faithfully representing and entirely constructing an objective world, a world they were able to present to minds charmed by the certitude and the precision of their results as if it were reality itself, a

⁴⁵ Ibid., 88.

⁴⁶ Adam C. English “‘Science Cannot Stop With Science’: Maurice Blondel and the Sciences,” 289.

⁴⁷ Maurice Blondel, *Action*, 92-93.

world of prestigious mechanisms where one could not tell whether it was the work of the senses or of reason.⁴⁸

The third discontinuity that Blondel diagnosed is that between the method and object of experimental psychology. The psychologist's method of observing subjects from the outside, as it were, fails to adequately capture the nature of action – what Blondel held to be the true object of psychology – because “in the very use of his “subjective method” [the psychologist] considers the subjective as fact and not as act; he disfigures it under pretext of studying it.”⁴⁹ To overcome the discontinuity, Blondel argued that psychology must adopt “not the static viewpoint of the understanding, but the dynamic viewpoint of the will.”⁵⁰ Its task, commensurable with Blondel's own phenomenological method, would be to explain the activity of consciousness from the inside: “A science of the subjective will inevitably be a mental dynamics.”⁵¹ The upshot was that Blondel promulgated scientific spiritualism to the level of a science of conscious activity rigorous enough both to rival and complement experimental psychology.

Blondel's own science of the subjective sought to explain the infinite power of the will, the animating force occluded by experimental psychology. From a third-person viewpoint, the will injects infinity – a concept of a piece with contingency – within the finite world of nature: “The infinite, that means here what surpasses every distinct representation and every determinate motive, what is without common measure with the object of knowledge and the stimulants of spontaneity.”⁵² But from the first-person viewpoint of consciousness – that is, from within the will itself – the infinite power of the

⁴⁸ Ibid., 90.

⁴⁹ Ibid., 106.

⁵⁰ Ibid., 106.

⁵¹ Ibid.

⁵² Ibid., 123.

will manifests as a chasm opened between the power of action and the results of action, what Blondel called respectively the “willing will” and the “willed will.” My capacity of willing appears to me as greater than what I will. And in turn, what I will never exhausts my power of willing. The subjective science of consciousness reveals the discontinuity at the heart of action: the impossible demand to harmonize the will’s power of becoming with what the will brings into being. “It is to get to the point where what we will proceeds spontaneously from ourselves and where there is as perfect an agreement as possible between the *élan* and the result of our effort, equality between the amplitude of the voluntary aspirations and the magnitude of the willed ends.”⁵³

The division that Blondel drew between the infinite power of the will (freedom) and the finite results of its actions (necessity) returned to the very problem that launched *L’Action*: why are we necessarily free? Blondel reached this fundamental discontinuity of the will after analyzing the discontinuities of the natural and human sciences. And not even the science of the subjective, the most elevated of the sciences, could mend the fundamental discontinuity between freedom and necessity, and thereby explain the necessity of freedom. Blondel’s pragmatist philosophy of action thus served to illuminate a metaphysical lacuna beyond the reach of the sciences.

Here Blondel went beyond other scientific spiritualists in his appeal to the divine as the ultimate ground of both scientific methodology and conscious activity. Spiritualists from Maine de Biran to Bergson, as I have explored, conceived consciousness as a window onto the absolute. The activity of the will, according to their spiritualist thesis, is not simply a phenomenal appearance, but participates in and reveals the dynamic structure of reality. In *L’Action*, however, Blondel pierced through the phenomenal

⁵³ Ibid., 141.

dimension of consciousness in order to shed light on a thoroughly Christian notion of the absolute. For God is the energetic wellspring from which human action draws its power; the infinite we feel in the willing will is His. “Wherever we stop, He is not; wherever we walk forward, He is. It is a necessity always to go further, because He is always beyond our action.”⁵⁴ In strikingly Bergsonian terms, Blondel identified God with the creative power in which human freedom participates: “It is because action is a synthesis of man with God that it is in perpetual becoming, as if stirred by the inspiration of an infinite growth.”⁵⁵ Yet our finite will never amounts to the antecedent initiative of God’s infinite will. It is because of God that action confronts a chasm between the willing will and the willed will. Blondel’s formulation echoed Kierkegaard’s maxim, “If there were nothing eternal in man, he could not despair at all.”⁵⁶ But the chasm that Blondel identified at the heart of action ultimately lays bare what he called the “one thing necessary.” Blondel employed the term to signify the one thing that humans cannot fully explain: the necessary being of action – that is, the necessity of freedom that inaugurated *L’Action*. We encounter the “one thing necessary” not in the form of a positive resolution of the problem, but instead, and fittingly, both as a constraint and as a choice for our practical action.

As a constraint, the one thing necessary manifests as the weight that the will bares: the insurmountable demand that action escape its finitude. “The ‘one thing necessary,’ then, is not the obscure side of my thought, the invisible reverse side of my consciousness and my action, as if I were to see it only within myself and as if all its

⁵⁴ Ibid., 325.

⁵⁵ Ibid.

⁵⁶ Søren Kierkegaard, *Sickness Unto Death: A Christian Psychological Exposition for Upbuilding and Awakening*. 1849. Trans. Howard B. Hong and Edna H. Hong (Princeton, NJ: Princeton University Press, 1980), 21.

reality consisted only in the idea I have of it.”⁵⁷ Blondel showed that God does not retreat from the world, but permeates our activity, for the will ineluctably tends toward the transcendent. As Blondel claimed, man aspires to be God. But it is an aspiration he can never fulfill. This philosophical constraint gives way to a practical choice: “to be God without God and against God, to be God through God and with God, that is the dilemma.”⁵⁸ Understood as a choice, the one thing necessary must be practically accepted. I cease treating it as postulate of the intellect and instead take it up as a motive for my action. On the one hand, I can restrict my will to the natural order, and in so doing make my own action the point of departure and of arrival for my destiny. In this case, I deny God. I can spurn the weight my will bears; but I fail to reconcile the tension between my inescapable demand for the infinite and my feigned conceit for the finite. On the other hand, I can acknowledge the finitude of my action and, ultimately, my dependence on God’s infinite power. “Reduced to its own resources alone, [the will] can only acknowledge its ignorance, its weakness and its desire, for it is true to its infinite ambition only inasmuch as it recognizes its infinite powerlessness.”⁵⁹ It is this constraint that philosophical analysis reveals as the foundation of scientific knowledge, beyond which theology opens the choice to receive God’s gift. Philosophy therefore paves the road to necessity, a necessity that only finds its reconciliation with freedom in the divine.

Blondel’s pragmatist contribution to scientific spiritualism, I want to suggest, hinged on his critique of neo-Kantianism as well as on his singular conception of the relation between philosophy and religion. Despite his critical stance toward the limitations of the positive sciences, a stance suggestive of a resolute anti-positivism,

⁵⁷ Maurice Blondel, *Action*, 321.

⁵⁸ *Ibid.*, 328.

⁵⁹ *Ibid.*, 345-346.

Blondel in fact leveled the brunt of *L'Action* against the limited picture of consciousness that Kant had bestowed upon modern philosophy. Kant believed that reason derails when it deviates from the straight track of scientific inquiry. But whereas Kant diagnosed the aporias of reason – what he called “the antinomies” – engendered by speculation untethered to the methodical analysis of natural phenomena, Blondel diagnosed the aporias manifest *within* the scientific manipulation of nature. “All the antinomies some have claimed to find in the realm of speculation reside in science itself,” Blondel averred, “Kant makes metaphysics depend on...the possible agreement between the *a priori* of the analytical syntheses and the *a posteriori* of the synthetic analyses. But it is in the sphere of the sciences that the duel and the reconciliation takes place, without our having to consider phenomena otherwise than as phenomena or to suppose anything else beside or underneath them.”⁶⁰ For Blondel, Kant construed speculation as fanciful and science as its antidote because he held a myopic conception of reason as an exclusively intellectual faculty. Blondel’s pragmatism sought to undo this conception, as he wrote to Boutroux, “I contemplated defining it otherwise than in Kantianism, with its relations between speculation and practice, between knowledge and existence; above all, I contemplated showing the indestructible reality and radical insufficiency of the entire natural order, in order to discover the flaw in what I believe had been separated.”⁶¹ True to scientific spiritualism, Blondel argued that it is not the limitations of reason, but the limitation of the sciences, which pave the path toward speculation.

Blondel further advanced scientific spiritualism in his account of the relationship between philosophy and theology, a subject he expounded upon in his *Lettre sur*

⁶⁰ Maurice Blondel, *Action*, 87.

⁶¹ Maurice Blondel, letter to Émile Boutroux, no date, CXII.28, Fonds Maurice Blondel, Archives de l’Université Catholique de Louvain.

l'apologétique (1896), published three years after *L'Action*. Blondel published the piece in response to the criticisms directed at his thesis, especially those of the Abbé Charles Denis, who in 1895 became editor of the *Annales de philosophie chrétienne*, the chief organ of academic theology in France. From his newfound pulpit, Denis intervened into the developing modernist controversy by targeting *L'Action*, the primary purpose of which, he claimed, “is to put Christian apologetics on a psychological terrain.”⁶² Christian apologetics is a form of essay written to support faith on a rational basis and defend it against misrepresentations. This, however, was only partially Blondel’s aim. His wider objective was to argue that a philosophical intervention into the problem of religion must respond to the exigencies of modern philosophy, which were imbricated with the natural and human sciences. Hence Blondel’s full title, *Lettre sur les exigences de la pensée contemporaine en matière d'apologétique et sur la méthode philosophique dans l'étude du problème religieux* [*Letter on the exigencies of contemporary thought in matters of apologetics and the method of philosophy in the study of the religious problem*]. Blondel showed that philosophy conducts a natural analysis of consciousness, whereas theology delimits the supernatural domain of religion. But this distinction, he enjoined, ought not to be taken for granted. Blondel sought to mobilize philosophy to clear the groundwork for theology, and reciprocally, to bring the problem of religion into the realm of modern philosophy. What was required, Blondel argued, was to upset what he called the prevailing notion of immanence: “that nothing can enter into a man’s mind which does not come out of him and correspond in some way to a need for

⁶² Abbé Charles Denis, “Les Idées et les homes: I. Nouvelles tendances de l’Apologetique philosophique; MM. Ollé-Laprune, George Fonsegrive, Maurice Blondel,” *Annales de philosophie chrétienne* T.32 (1895): 656. Blondel later took over the journal in 1905 following Denis’ death.

development.”⁶³ So long as philosophy, in the wake of Kant’s *Critiques*, remained a hermetically immanent inquiry untouched by the supernatural, then philosophers failed to incorporate religion, foreclosing them from advancing a sufficiently rigorous science. “For no science can be precisely defined unless we recognize the presence and, as it were, the pressure, of a limit beyond which other perspectives lie open, determining both what it is and what it is not.”⁶⁴ Blondel argued that philosophy and theology, instead of constituting absolutely separate domains, meet in what he called “immanent transcendence.” Philosophy illuminates the “the blank spaces which cannot be filled in or established in their reality by any resources of ours,” and thus offers theology a point of departure.⁶⁵ It is philosophy’s task neither to formulate a concept of God nor to justify His existence. “[Philosophy] cannot therefore pronounce on the question of fact,” Blondel argued, “it can only determine the dispositions which prepare for the understanding of facts and for the practical discovery of truths which emanate from another source.”⁶⁶ Philosophy indicates the possibility of faith by the direction of action.

Amidst the explosion of the natural and human sciences in the late nineteenth century, Blondel wielded Catholicism to push the domain of scientific inquiry beyond its boundaries. But he equally steered the sciences into the service of religion. As Jean Leclercq argues, Blondel advanced a new ontological proof of God.⁶⁷ Instead of having deduced God’s existence from His concept, Blondel prepared the ground for the

⁶³ Maurice Blondel, *The Letter on Apologetics & History and Dogma*, trans. Alexander Dru and Illytd Threthowan (Grand Rapids, MI: Eerdmans, 1994), 152, originally published as “Lettre sur les exigences de la pensée contemporaine en matière d’apologétique et sur la méthode philosophique dans l’étude du problème religieux,” *Annales de Philosophie Chrétienne* 131 (1896): 337-47, 467-82, 599-616; 132 (1896): 225-67, 337-50.

⁶⁴ *Ibid.*, 181.

⁶⁵ *Ibid.*, 159-60.

⁶⁶ *Ibid.*, 134.

⁶⁷ Jean Leclercq, “Du Dieu qui vient à l’action: Le dénouement blondélien,” *Revue philosophique de Louvain* 99, no. 3 (2001): 422-52.

supernatural from within the natural: “Instead of looking for the necessary outside the contingent itself, as an ulterior term, it manifests it within the contingent itself, as a reality already present.”⁶⁸ As I hope to have shown, Blondel allied his faith, as well as the faith of his Catholic peers, to the project of scientific spiritualism. Blondelian pragmatism therefore forged a new rapprochement between the natural and the supernatural in scientific spiritualism.

Le Roy’s Spiritualist Positivism

Édouard Le Roy was born in Paris on June 18, 1870. Raised in a sailing family that moved to the capital from the coastal town of Le Havre, Le Roy had his eyes set on the École normale from an early age. He entered in 1892, received a diploma in mathematics three years later, and proceeded to earn a doctorate in the subject in 1898. Le Roy studied under the famed mathematician and physicist Henri Poincaré, who lectured at the Sorbonne. But just a stone’s throw away at the Collège de France, the young Le Roy attended Bergson’s public lectures. Bergson’s thought held the key, Le Roy believed, to advancing his Catholic faith in a renewed dialogue with the sciences, and to further excavating the metaphysical foundations of the mathematical revolution in non-Euclidean geometry that Poincaré was carrying out. Le Roy dedicated his corpus to synthesizing the work of these two grand thinkers of the *fin de siècle*, while deepening scientific spiritualism under the banner of what Le Roy called “spiritualist positivism.”

“Spiritualist positivism” re-asserted the scientific basis of French spiritualism, which Le Roy believed would shepherd the movement into the twentieth century. This

⁶⁸ Maurice Blondel, *Action*, 318.

new positivism “far from having been called from outside, as it were, by metaphysical and moral preoccupations,” Le Roy wrote, “has appeared from the inside of science, under the pressure of its internal needs, and in contact with its very facts and theories.”⁶⁹ In appropriating the title of “positivism” from Comte and his disciples, Le Roy sought to expand what counts as a positive fact to include the facts of consciousness, as Bergson had forcefully propounded in his *Essai sur les données immédiates de la conscience*. The term also alluded to the realist or spiritualist positivism that Ravaisson foretold in his 1867 *Rapport*. Le Roy did not simply reject positivism, nor even its deflation of metaphysics in the name of scientism; he instead took aim at the priority that the positivists of the mid-nineteenth century conferred upon discursive reasoning. Positivism, Le Roy argued, depended upon the intellectualism endemic to Kantianism. Spiritualist positivism, by contrast, advanced a pragmatist account of conscious activity: “In short, the new philosophy is neither... a philosophy of emotions nor a philosophy of the will: it would instead be a philosophy of action. Now action,” Le Roy clarified, “without a doubt implies emotions and the will: but it also implies something else, in particular, reason... *The light and truth should be, in the end, sought after in the very movement by which action unifies the soul.*”⁷⁰ It was by no means innocent for Le Roy to christen scientific spiritualism a positivism. In 1913, the philosopher André Lalande solicited Le Roy’s definition of “positivism” for the *Vocabulaire technique et critique de la philosophie*, the first dictionary in France to standardize philosophical terminology.⁷¹ But Lalande found

⁶⁹ Édouard Le Roy, “Un Positivismisme Nouveau,” *Revue de Métaphysique et de Morale* T. 9, No. 2 (1901): 139.

⁷⁰ Édouard Le Roy, “Sur quelques objections adressées à la nouvelle philosophie,” *Revue de Métaphysique et de Morale* T. 9, No. 3 (1901): 316-317.

⁷¹ Lalande began publishing the dictionary at the behest of the Académie Française in the *Bulletin de la Société Française de Philosophie* from 1902 to 1923. The *Vocabulaire technique et critique de la philosophie* has since undergone nineteen editions with Presses universitaires de France.

Le Roy's entry too idiosyncratic: "most of our colleagues are of the opinion that the word positivism does not suit your doctrine. For positivism," Lalande urged, "takes as its principle...that the conclusions of the "positive sciences" are the very model of certitude, and that their progress is the most important for philosophical thought, to the exclusion of any metaphysics, of any possibility of attaining things in themselves."⁷² Yet, the accepted definition of positivism belied the very project Le Roy sought to carry out: to place metaphysics in continuity with the positive sciences.

Le Roy explicated his spiritualist positivism in a series of programmatic essays, "Science et philosophie," which appeared in 1899 at a decisive moment. Le Roy published the compilation in the *Revue de métaphysique et de morale* on the eve of the First International Congress in Philosophy, which the journal's editors organized in Paris.⁷³ The essays set the terms of the mutual conversation between scientists and philosophers that Le Roy hoped to stage at the Congress. His aim was "to open our eyes to the nature of contingency and the relativity of scientific constructions."⁷⁴ But Le Roy equally enjoined philosophers "no longer to forget that their effective point of departure is scientific truth."⁷⁵ The division of intellectual labor that Le Roy drew between science and philosophy reflected Bergson's method of apportioning each to their respective

⁷² André Lalande, letter to Édouard Le Roy, 24 July 1913, 1 N.A. 2 art. 12, Fonds Édouard Le Roy, Archives de l'Institut Catholique de Paris.

⁷³ The young philosophers Léon Brunschvicg, Élie Halévy, and Xavier Léon founded the *Revue de Métaphysique et de Morale* in 1893. It was the second major French philosophy journal to appear in the late nineteenth century, following the *Revue philosophique*. The journal's editors rallied philosophers of diverse stripes, first, through the International Congress of Philosophy, a symposium subsequently convened every three to four years; and second, through the Société française de philosophie, founded in 1901 to provide a forum for philosophical debate, the proceedings of which were published in the *Bulletin de la société française*. Both the congress and society still exist today. See Stéphan Soulié, *Les philosophes en République. L'aventure intellectuelle de la Revue de métaphysique et de morale et de la Société française de philosophie (1891-1914)* (Rennes: Presses universitaires de Rennes, 2009).

⁷⁴ Édouard Le Roy, "Science et Philosophie (III)," *Revue de Métaphysique et de Morale* T. 7, no. 6 (1899): 708.

⁷⁵ *Ibid.*, 709.

dimensions of conscious experience. Indeed, Le Roy set himself the task of extending Bergson's account of these dual dimensions, originally developed in the *Essai* and *Matière et mémoire*, in order to trace the genesis of scientific reasoning and philosophical speculation from their shared origin in humans' pragmatic engagements with the material world.

"Science et philosophie" distinguished three dimensions of experience: first, the body's primordial and, above all, practical intercourse with its environment; second, discursive reasoning, which renders practical activity intelligible by means of symbols; and third, creative speculation, which departs from practical exigencies. Following Bergson, Le Roy conceived science and philosophy as two dimensions of consciousness, apportioned respectively to the spatial and temporal; but he further clarified that both dimensions emerge out of the same pragmatic embodiment. The body's action-oriented perception cuts the initial contours of conscious experience, according to which "the border of an object marks only the limit where an object ceases to interest our action and, since we act principally by contact, it is most often tactile and muscular impressions that determine its borders."⁷⁶ Le Roy's phenomenology of bodily activity explained the initial division [*morceler*] of space into discrete objects, the immediate content of experience that discursive reasoning in turn elevates to a heightened degree of abstraction. By setting discursive reasoning in continuity with the body, Le Roy demonstrated that scientific symbols are not simply artificial notions imposed on experience from without. Rather, they develop from within the body's intercourse with the world.

⁷⁶ Édouard Le Roy, "Science et philosophie (I)," *Revue de Métaphysique et de Morale* T. 7, no. 4 (1899): 384.

Symbols of measurement, such as intensity, tonality, purity, and extensity, constitute conventions; but Le Roy insisted that they are conventions allied to the body's innate action-oriented tendencies. "Positive science can thus be defined: an immediate prolongation of common sense."⁷⁷ The maxim reflected Poincaré's principle that mathematics depends upon intuition in the contexts of discovery as well as justification. Mathematic concepts, that is to say, do not issue from the understanding alone, but must be adapted to particular problems. Le Roy sought to support his teacher's claim by showing that the mathematic symbols of Euclidian space in particular are not innate categories of reason, as Kant had believed, but instead facilitate the manipulation and measurement of matter. Any number of alternative mathematical symbols, including non-Euclidean concepts of space, could equally meet the pliable demands of discursive reasoning. Le Roy therefore radicalized Bergson's account of space, understood as a practical dimension of consciousness, in order to lay the metaphysical groundwork for Poincaré's conventionalism, emblemized by his claim, "what they [mathematics] have gained in rigor, they have lost in objectivity. It is by distancing themselves from reality that they acquired this perfect purity."⁷⁸ Le Roy agreed that mathematical concepts are conventions, but conventions that remain in contact with nature.

Philosophy, however, resists the natural bent of the body's pragmatic interests. Le Roy argued that philosophy follows a path of creative speculation opposed to that of discursive reasoning. "Extracting an analysis of the fundamental postulates of common or scientific discourse, cutting off from any point of view that is not that of pure speculation, seizing the internal soul of things in its concrete richness and living originality, and

⁷⁷ Édouard Le Roy, "Science et philosophie (II)," *Revue de Métaphysique et de Morale* T. 7, no. 5 (1899): 506.

⁷⁸ Henri Poincaré, *Science et Méthode* (Paris: Flammarion, 1908), 131.

bringing about the supreme unity of knowledge and life: these are [philosophy's] ultimate mission."⁷⁹ Philosophy, Le Roy believed, is the means by which humans exercise their freedom, since philosophy restores the continuity of experience fractured by the quotidian requirements of perception and compartmentalized by the intellectual demands of discursive reason. "In a word," what philosophy achieves is "a positive definition of the spirit, working to form a new intuition of psychic activity, and finally learning to live with the true ground of oneself: that is the task of philosophy, whose proper name is Spiritualism."⁸⁰

Le Roy's refutation of intellectualism opened his spiritualist positivism to criticism by neo-Kantian critics. Léon Brunschvicg forcefully defended intellectualism in the face of what he took to be Le Roy's monolithic and static account of discursive reason. In Brunschvicg's eyes, Le Roy inflated philosophy's speculative prerogative only by narrowing the domain of discursive reason to logic chopping. In an article responding to "Science et philosophie," Brunschvicg defended "the real character of intellectualism," which Le Roy disfigured by "deliberately breaking up the synthetic unity of thought and returning it to the static elements on which the dogmatism of long ago was founded."⁸¹ Indeed, stark characterizations such as Le Roy's claim, "Science is a ruse of the spirit for conquering the world,"⁸² certainly invited Brunschvicg's criticism. It appeared that Le Roy had driven a wedge between the discursive and speculative dimensions of consciousness, lending the impression that science is invariable, and philosophy, by contrast, is a

⁷⁹ Édouard Le Roy, "Science et Philosophie (III)," 715.

⁸⁰ Édouard Le Roy, "Science et philosophie (IV)" *Revue de Métaphysique et de Morale* T. 8, no. 1 (1900): 65.

⁸¹ Léon Brunschvicg, "La Philosophie nouvelle et l'intellectualisme," *Revue de Métaphysique et de Morale* T. 9, no. 4 (1901): 437-438.

⁸² Édouard Le Roy, "Science et philosophie (II)," 544.

dynamic enterprise. Yet, in response to Brunschvicg, Le Roy insisted that his critique of intellectualism sought to demonstrate that science depends not only on discursive reason, but also on corporeal and motor engagements with the physical world: “the entire ensemble of preliminary movements by which we prepare ourselves to seize an object, describe its contours, experiment with its functions, palpate it, move it, handle it, in sum, to practice with it and live it.”⁸³ Le Roy thus took spiritualist positivism both to expand the genesis of science and to elevate the metaphysical prerogative of philosophy.

Theological Pragmatism: The Problem of Dogma

In *Lamentabili Sane Exitu*, Pope Pius X specifically condemned those who believe, “The dogmas of the Faith are to be held only according to their practical sense [*regula praeceptiva actionis*]; that is to say, as preceptive norms of conduct and not as norms of believing.”⁸⁴ Blondel and Le Roy were among the unacknowledged, though nonetheless legible, targets. Both argued that dogmas depend on action-oriented principles, and not on exclusively intellectual convictions.

The problem of dogma lay at the heart of the Modernist controversy in France, and provoked Blondel and Le Roy to pivot from philosophical to theological debates. Dogmas are the infallible truths of Catholic doctrine. They have been declared since the biblical era of the Apostles, and extend through the modern Church. The dogma of transubstantiation, for example, lay at the center of the rift between Lutheranism and Catholicism in the sixteenth century. While both recognized the real presence of Christ in

⁸³ Édouard Le Roy, “Sur quelques objections adressées à la nouvelle philosophie,” *Revue de Métaphysique et de Morale* T. 9, No. 3 (1901): 311.

⁸⁴ “*Lamentabili Sane Exitu*,” Proposition 26.

the Eucharist, Catholics contended that communion transforms bread and wine into Christ's body and blood, whereas Luther believed that transubstantiation is simply a symbolic, but not metaphysical, doctrine. In the nineteenth century, Pope Pius IX defined the Immaculate Conception of Mary, Her birth untainted by original sin, as a dogma.⁸⁵ And as recently as 1950, Pope Pius XII promulgated the additional dogma of Mary's Assumption, Her bodily and spiritual ascendance to heaven upon death.⁸⁶ But the problem of dogma at stake in late nineteenth-century France hinged on the very possibility of revealed truth. On what grounds could Catholic dogma claim to be true in the face of modern science? And how could Catholics continue to defend their beliefs in the face of the ascendant scientific methods of experimentation and verification? In their effort to adapt dogmata to the scientific demands twentieth century, Blondel and Le Roy plunged into the Modernist controversy, and in so doing advanced a decidedly pragmatist turn in scientific spiritualism.

Dogmas preoccupied theological debates following the problem of historicism broached by Loisy. Since the Church had evolved since the time of Jesus, Loisy claimed, the dogmas that he announced had also changed over to the course of two millennia. "He demanded faith in the approaching kingdom," Loisy wrote, "but the idea of the kingdom and of its proximity were two very simple symbols of very complex matters, and even those who were the first to believe must have attached their minds more to the spirit than to the letter."⁸⁷ The separation that Loisy had cleaved between the history of the gospels and the evolution of the Church left the meaning and value of dogmas open to debate.

⁸⁵ See Pope Pius IX, "Ineffabilis Deus (8 Dec. 1854)," *Papal Encyclicals Online*, <http://www.papalencyclicals.net/Pius09/p9ineff.htm> (accessed 1 Feb. 2014).

⁸⁶ See Pope Pius XII, "Munificentissimus Deus (1 Nov. 1950)," *Papal Encyclicals Online*, <http://www.papalencyclicals.net/Pius12/P12munif.htm>, (accessed 1 Feb. 2014).

⁸⁷ Alfred Loisy, *The Gospel and the Church*, 218.

Are dogmas timeless representations of miracles? Or are they mere symbols whose expressive force transforms over time? Loisy's answer was unequivocal: "The Church does not exact belief in its formulas as the adequate expression of absolute truth, but presents them as the least imperfect expression that is morally possible; she demands that man respect them for their quality, seek the faith in them, and use them to transmit it."⁸⁸ Loisy dared to claim that the historical development of the Church confirmed the pragmatic, rather than absolute, value of dogmata.

Blondel on History and Dogma

Blondel tackled the problem in 1904 with a series of articles, "L'Histoire et dogme." The articles were originally conceived in 1897 as part of a larger project, *L'Esprit chrétien*, which Blondel would not publish until 1944. But the rising ferment surrounding Loisy's historicist method spurred Blondel to intervene in the debate directly. At stake in "L'Histoire et le dogme" was the question of how to relate the facts of Christian history to the beliefs central to the Church's teaching without reducing one to the other. How, that is, does the Bible ensure the Church's authority at the same time as the Church interprets and supports the Bible? Blondel sought to explain the principle that synthesizes both, guaranteeing at once that dogmas are more than mere echoes of the gospels' original testimony, and that the Church participates in and inflects a sacred history more expansive than the sum total of its teachings. The problem, according to René Marlé, amounted to articulating a principle that "is at the same time that of the relations of Scripture to the Church, and that of an eternal truth given "once and for all"

⁸⁸ Ibid., 224.

the manifestation of which develops in time.”⁸⁹ Blondel called the principle “tradition.” He claimed that tradition is a “living synthesis” of the collectivity and the individual, embracing “within it the facts of history, the effort of reason and the accumulated experiences of the faithful.”⁹⁰ The value and purpose of dogmas, Blondel averred, is to convey tradition.

Blondel did not defend a fossilized notion of tradition. “So far is “development” from being heterodox,” he wrote, “that it is the static idea of tradition, fixism, which is the virtual heresy.”⁹¹ Blondel coupled his idiosyncratic account of the Church’s history with a critique of the thesis of historicism, and of Loisy’s version in particular. Blondel argued that Loisy’s historicism amounted to a positivist accumulation of historical facts, and further, that his principle of evolution, which Loisy conceived as Christians’ “living faith,”⁹² only reflected the external pressures that the Church confronted over time. Blondel forged his principle of tradition to mend the division that historicism tore open between the miracles preceding the founding of Christianity and the Church’s subsequent development. “If one accepts [historicism],” Blondel wrote, “although one might continue to say that Christianity is founded *on* Christ as a cathedral is built on a geological foundation, one can no longer add that it was explicitly founded *by* Christ, because one no longer looks behind the historical facts for a substantial and active reality.”⁹³ As long as history remains confined to facts alone, then the history of Christianity, Blondel argued, would constitute one chronology among others. For

⁸⁹ Père René Marlé, *Au Cœur de la crise moderniste* (Paris: Aubier, 1960), 201.

⁹⁰ Maurice Blondel, “History and Dogma” in *The Letter on Apologetics & History and Dogma*, 269, originally published as “Histoire et dogme: Les lacunes philosophiques de l’exégèse moderne,” *La quinzaine*, 56 (1904): 145-67; 349-73: 433-58.

⁹¹ Maurice Blondel, “History and Dogma,” 275.

⁹² Alfred Loisy, *The Gospel and the Church*, 87.

⁹³ Maurice Blondel, “History and Dogma,” 247.

Blondel, historicism furnished a wholly inadequate justification for the authority of the Church's teaching.

What then is the status of the Church's history? And on what basis is it subject to modification without severing the thread connecting Jesus' ministry to contemporary Christians' belief in his miracles? Blondel invoked his philosophy of action to resolve these problems. Tradition reflects the infinite action of Christian history, of which the scriptures are only finite expressions: "[Tradition] relies, no doubt, on texts, but at the same time it relies primarily on something else, on an experience always in act which enables it to remain in some respects master of the texts instead of being strictly subservient to them."⁹⁴ Blondel claimed that the collective action of Christianity, embodied in tradition, overflows the particular acts crystallized in dogmas. In a letter to Blondel, Boutroux recognized that his former student elevated his thesis in *L'Action* to the animating principle of Christian history: "It is indeed from within that the facts must be acted upon. It is the spirit [*l'esprit*] which is the seat of religion, but it is the spirit of another order than what appears and passes. And its reality, for us, is in fact other than both mind and matter."⁹⁵ Blondel thus tied his theological critique of historicism to his philosophical critique of intellectualism in the name of a pragmatic notion of history. The formulations of scripture only appeal to the intellectual capacities of believers. Tradition, however, is not transmitted by exclusively intellectual means; it inheres neither in a supernatural world divorced from the natural world, nor in the historian's balance sheet. Tradition is the historical activity that preserves the Church's "sovereign authority in

⁹⁴ Ibid., 267.

⁹⁵ Émile Boutroux, letter to Maurice Blondel, 20 Aug. 1905, CIV.98, Fonds Maurice Blondel, Archives de l'Université Catholique de Louvain.

regard to Scripture, but in such a way as to leave the Scriptures their own physiognomy and their original spontaneity.”⁹⁶

It was in his engagement with problem of dogma that Blondel radicalized his philosophy of action. Dogmas, Blondel argued, manifest the collective and historical action of Christianity. Far from being mere symbols depending on individual faith, dogmas are the living deposits of Christian tradition. The modernist crisis thus provoked Blondel to articulate a fully socialized and historicized pragmatism.

Le Roy on Pragmatism and Dogma

Le Roy delved into the debate over dogma in “Qu’est-ce qu’un dogme?” – an article that extended his pragmatist critique of intellectualism originally developed in “Science et philosophie.” Le Roy sought to adapt dogmas to the requirements of modern science in order to safeguard his Catholic faith from the demands of experimentation and verification. The dilemma, he surmised, was that Catholics too easily opened their faith to scientific criticism by conflating revealed truths with logical truths. Catholics’ error consisted of construing dogmas as intellectual propositions, as if they were statements of a theorem, and thus, in the eyes of modern science, an indemonstrable theorem. To resolve the dilemma, Le Roy argued that Catholics should instead treat the Church’s teachings as practical propositions. By construing the nature of dogmas as practical rather than intellectual, Le Roy claimed to undermine the very ground on which science could contradict Catholic teachings. “The Catholic, obliged to accept them, is not restrained by

⁹⁶ Maurice Blondel, “History and Dogma,” 281.

them except as regards rules of conduct, not as regards any particular conceptions.”⁹⁷

Freed from the duty of defending a *theory* of God’s teachings, Catholics could nonetheless follow His practical rules, unencumbered by scientific reproach.

“Qu’est-ce qu’un dogme?” appeared the year following Blondel’s “Dogme et Histoire.” Le Roy presented his article as a series of interrogations, wary that he might be received as having expounded a new theology.⁹⁸ His goal was to deepen the debate already underway in French Catholic circles. Le Roy’s pragmatist inquiry drew the praise of progressive Catholics such as Loisy.⁹⁹ Yet most found the article to be sacrilegious for having evacuated Catholicism of its core tenets, as when Le Roy claimed, “it cannot be repeated too often that Christianity is not a system of speculative philosophy but a source and regimen of life, a discipline of moral and religious action, in short the sum total of practical means to obtain salvation.”¹⁰⁰ One priest decried Le Roy’s “attitude as dangerous to the faith of so many.”¹⁰¹ Another compared Le Roy with such detestable heretics as Gnostics, Manicheans, Waldensians, and Voltairians.¹⁰² Blondel, for his part, suspected that Le Roy had recklessly flouted the Vatican. In a letter to Lucien Laberthonnière, the progressive priest and public proponent of *L’Action*,¹⁰³ Blondel confided that he believed Le Roy had gone too far: “I wish to say to Édouard, “Beware!” You are rolling down a hill that will take you much farther than you think, somewhere I

⁹⁷ Édouard Le Roy, *What is a Dogma?*, trans. Lydia G. Robinson (Chicago: Open Court, 1918), 83, originally published as “Qu’est-ce qu’un dogme?,” *La Quinzaine* 63 (1905): 495-526; Le Roy outlined his contributions to the problem of dogma as early as 1902 in “Discussion sur les éléments chrétiens de la conscience contemporaine,” *Bulletin de la Société française de philosophie* 2 (1902): 62.

⁹⁸ *Ibid.*, 28.

⁹⁹ Alfred Loisy, letter to Édouard Le Roy, 6 June 1905, 1NA1 Art. 16, Fonds Édouard Le Roy, Archives de l’Institut Catholique de Paris.

¹⁰⁰ Édouard Le Roy, *What is a Dogma?*, 71.

¹⁰¹ Abbé Wehrlé, letter to Édouard Le Roy, 5 July 1905, 1NA1 Art. 16, Fonds Édouard Le Roy, Archives de l’Institut Catholique de Paris.

¹⁰² G. Letourneux, letter to Édouard Le Roy, 12 May 1905, *Ibid.*

¹⁰³ See Lucien Laberthonnière, “Le problème religieux,” *Annales de philosophie chrétienne* 132 (1897): 497-511; 615-32.

refuse to let myself be taken.”¹⁰⁴ Blondel’s caution proved prescient. The Vatican promptly listed Le Roy’s books on the Index, alleging that Le Roy had condemned belief in favor of practice.

Yet Le Roy intended not to evacuate the theoretical content of dogmas, but instead, to delimit their intellectual and pragmatic dimensions. As part of his critique of intellectualism, Le Roy argued that the theoretical content of dogmas derives from their pragmatic guidance. The dogma of Jesus’ resurrection, for example, amounts to a practical metaphor: “Be in relation to him as you would have been before his death, as you are with a contemporary.”¹⁰⁵ Its intellectual dimension, in turn, serves to guard against heretical notions of Jesus’ resurrection. Debates over theoretical interpretations, in other words, arise amidst schisms within the Church; and it is in these cases that the intellectual dimension of dogmata functions negatively to condemn heresies. The clergy and the laity may construe the theoretical meaning of the resurrection differently. “But whether ignorant men or philosophers, men of the first or of the twentieth century, every Catholic has always had and always will have the same practical attitude with regard to Jesus.”¹⁰⁶ Although the theoretical meaning of dogmas participate in the flux of time, their pragmatic meaning, Le Roy argued, endures as a guidepost for the Catholic community.

Blondel believed that Le Roy had pushed his pragmatism both too far and not far enough. Not far enough, because Le Roy conceived the practical value of dogmas in narrowly subjective terms, as if dogmas offer guidance only to individuals; whereas

¹⁰⁴ Maurice Blondel, letter to Lucien Laberthonnière, 10 Nov. 1905, XXIX.3, Fonds Maurice Blondel, Archives de l’Université Catholique de Louvain.

¹⁰⁵ Édouard Le Roy, *What is a Dogma?*, 70

¹⁰⁶ *Ibid.*, 88.

Blondel, to the contrary, conceived dogmas as expressions of collective practice. Too far, Blondel contended, because Le Roy risked liquidating the distinctly Catholic content of Church doctrine. Le Roy had distorted faith by tethering divine love to humans' autonomous will. What went forsaken, Blondel charged, was the heteronomy by which our individual will depends on God's infinite will:

The more I reflect, the more it seems to me that our divergences are based on this profoundly deep cause: we do not have same idea of the supernatural. It would nearly seem that you only see the supreme blossoming of our own nature, as if it were a crowning achievement of the divine destiny calling us – a destiny which is realized by the harmonious development of our whole being; but this apparent heteronomy turns into a perfect autonomy. For me, to the contrary, the autonomy of our will must accept, even love, the real and irreducible heteronomy of divine love.¹⁰⁷

As long as Le Roy's pragmatic account of dogma remained confined to subjective psychology, Blondel argued, then the grace of God's gift becomes unthinkable. For divine love arrives as "an intrusion, as a substitution in us of the infinite that expands so far that we cry in pain."¹⁰⁸

Bergson, however, believed that Le Roy had established a prudent division of labor between the intellectual and pragmatic dimensions of faith in "Qu'est-ce qu'un dogme?" "The article arrives at an important philosophical conclusion, namely, that a dogmatic proposition can be determinate and precise while its meaning carries a share of indetermination. It suffices," Bergson added, "that the proposition relies on a practical attitude, which outlines in a way the motor articulations of meaning – the meaning itself remaining (partially) indeterminate."¹⁰⁹ What Bergson saw, and Catholic critics

¹⁰⁷ Maurice Blondel, letter to Édouard Le Roy, 16 Nov. 1905, in Maurice Blondel, *Lettres philosophiques*, 258.

¹⁰⁸ Ibid.

¹⁰⁹ Henri Bergson, letter to Édouard Le Roy, 31 May 1905, 1NA1 Art. 16, Fonds Édouard Le Roy, Archives de l'Institut Catholique de Paris.

neglected, in Le Roy's pragmatist conception of dogma, was the rejuvenated basis he furnished for faith, at once reconciled with and insulated from modern science. The conception took its point of departure from "Science et philosophie," Just as the explanatory power of science depends on embodied practices, so too does dogma take its divine authority from the body's submission to Catholic practice. But "practice," Le Roy insisted "does not in the least mean a blind step, without relation to thought or consciousness."¹¹⁰ Le Roy saw himself as expanding the domain of faith beyond the intellect, and thus as building upon a corporeal account of consciousness originally developed as part of his spiritualist positivism.

The debate over dogma provided Blondel and Le Roy with the opportunity to advance their pragmatist account of consciousness. At stake was the possibility and value of religious belief in the face of scientific advancements. These two thinkers penetrated the depths of religious consciousness using the very scientific methods with which they were originally trained. Their debate, it should be highlighted, resonated beyond the pages of Catholic journals. It found expression in French culture through the *semaines sociales*, founded in 1904 to extend Catholic teachings to working class struggles. These "social weeks" were summer meetings organized in different cities outside of Paris. They attracted as many as two thousand people to attend seminars on Catholic social doctrine and discuss proposals to improve workers' lives. Marius Gonin and Adéodat Boissard, Blondel's brother-in-law, originally organized the *semaines sociales* as a democratic alternative to the growing strength of the neo-monarchist Action française movement.

¹¹⁰ Édouard Le Roy, *What is a Dogma?*, 79.

Gonin and Boissard heeded the call of Pope Leo XIII in 1901 to promulgate democratic action in social life.¹¹¹ But Church authorities soon suspected the *semaines sociales* of incubating modernism. Their organizer, Henri Lorin, advocated the philosophy of his mentor, Blondel, in arguing that the dynamic impulse of the will underpinned workers' solidarity.¹¹² By 1907, the *semaines sociales* came to be seen as a bastion of collectivism, a fear sparked by an outbreak of strikes across northeastern France by the socialist workers' movement.

As the Vatican's condemnations of modernism casts a shadow of paranoia over French Catholic circles, Blondel went in hiding and pseudonomously published his subsequent work.¹¹³ Le Roy, undeterred by the ferocity of his critics, plunged further into the debate in 1907 with *Dogme et critique*, an expanded version of the article he has published two years before. Fresh off the press, Le Roy's treatise ended up on the Vatican Index. The fervor surrounding Le Roy's pragmatism was so vitriolic that Blondel soon after distanced himself from Bergson's student – a strategic, though dubious, philosophical fib.¹¹⁴

The pragmatist moment in scientific spiritualism found its expression in the philosophical and theological ideas of Blondel and Le Roy. But it was the modernist controversy in particular that precipitated these thinkers' own radicalization of their

¹¹¹ Pope Leo XIII, "Graves de Communi Re (January 18 1901)," *Papal Encyclicals Online*, <http://www.papalencyclicals.net/Leo13/113grcom.htm> (accessed 1 Feb. 2014).

¹¹² Peter J. Bernardi forcefully makes the connection between Blondel and the *semaines sociales* in "Social modernism: the case of the *Semaines sociales*," in *Catholicism Contending with Modernity*, ed. Darrell Jodock (New York: Cambridge University Press, 2000), 277-307.

¹¹³ Most notably, Testis, "La semaine sociale de Bordeaux et le monophorisme: controverses sur les Méthodes et les Doctrines," *Annales de Philosophie chrétienne* 159 (1909): 5-22, 162-84 245-78; (1910): 372-92, 449-72, 561-92; 160 (1911): 127-62.

¹¹⁴ Le Roy acknowledged his debt to Blondel in *Dogme et critique* (Paris: Bloud, 1907), 70. Blondel subsequently disavowed any likeness between his thought and Le Roy's in "L'Apologétique et la philosophie de M. Blondel," *Revue du clergé français* 50 (1907): 546.

pragmatism: from the philosophy of action to the theology of action. Indeed, the problems of historicism and dogma, which shook the Church's foothold in France, set the stage for Blondel and Le Roy to articulate a historical and social account of conscious activity. In so doing, these thinkers not only propelled scientific spiritualism into social and religious thought, but they also ushered the movement into the twentieth century.

Conclusion: 1907

In 1908, Émile Boutroux reflected on the four decades that had passed since Félix Ravaisson foretold the rise of “spiritualist realism or positivism” in his seminal *Rapport on the state of French philosophy*.¹¹⁵ Boutroux observed that philosophy, “far from claiming to be self-sufficient, considers that it could only find in the sciences, life, and the arts, as they develop spontaneously, the necessary material for its theories.”¹¹⁶ Yet, philosophy in the twentieth century confronted a self-effacing precipice: “the present movement tends toward the complete abolition of philosophy,” he worried, “and its pure and simple replacement by science.”¹¹⁷ The antidote, Boutroux urged, lay in renewing the guiding impetus of scientific spiritualism, which marshaled the sciences to yield new metaphysical problems. Philosophers might thus “find themselves driven to consider, beyond proper facts, those actual realities grasped with the senses, the internal and subjective work of the spirit, the living power that exceeds in reality and richness all the concrete forms through which it appears.”¹¹⁸ By 1908, Boutroux was memorializing the movement that he had once helped to set in motion by finding in the sciences a launching pad to revolutionize the place and role of consciousness in the world. His reflections came on the heels of Bergson’s opus, *L’Évolution créatrice* (1907), which brought the project of scientific spiritualism to its culmination with the celebrated notion of the *élan vital*.

¹¹⁵ Felix Ravaisson, *Recueil de “Rapports” sur les progrès des lettres et des sciences en France, Rapport sur la philosophie en France au XIXe siècle*. (Paris: Imprimerie impériale, Hachette et Cie, 1867), 258.

¹¹⁶ Émile Boutroux, “La Philosophie en France depuis 1867,” *Revue de Métaphysique et de Morale* T. 16, no. 6 (1908): 685.

¹¹⁷ Ibid.

¹¹⁸ Ibid., 714.

In *L'Évolution créatrice*, Bergson elevated scientific spiritualism on the basis of evolutionary biology. He confronted the nascent science in order to tackle a particular problem: how does the same organic structure – specifically, the eye – emerge in species with divergent genetic lineages? Why is it that the pigment-spot of pecten (found in clams and scallops), the eye of mollusks, and the eye of vertebrae, all present analogous cellular structures, evident in the oculi, retina, and cornea? The problem confronted the limits of evolutionary theory, since “The more two lines of evolution diverge, the less probability is there that accidental outer influences or accidental inner variations bring about the construction of the same apparatus upon them, especially if there was no trace of this apparatus at the moment of divergence.”¹¹⁹ According to Bergson, the presence of the same organic structure across divergent evolutionary lineages indicates that the data of biology pose a problem irresolvable by the science’s methods alone. The methods available in 1907 were either neo-Lamarckian or Darwinian, which held that pecten, mollusks, and vertebrae had all developed similar eyes because each adapted to the environment, either by undergoing direct bio-chemical alterations, as neo-Lamarckians such as Theodor Eimer argued,¹²⁰ or by gradually eliminating unadapted variations in the struggle for survival, as Charles Darwin claimed. Such explanations appealing to adaptation fall flat, Bergson argued, since, even if they could successfully isolate the same environment for different species, the environment does not function like a container to which species passively adapt. The organism does not externally conform to its surroundings, but instead, as it were, poses a problem to the environment, and

¹¹⁹ Henri Bergson, *Creative Evolution*, trans. Arthur Mitchell (New York: Henry Holt, 1911), 54; originally published as *L'Évolution créatrice* (Paris: Félix Alcan, 1907).

¹²⁰ Theodor Eimer, *Die Entstehung der Arten auf Grund von Vererben erworbener Eigenschaften nach den Gesetzen organischen Wachstums* (Leipzig: Verlag Von Wilhelm Engelmann, 1888).

undergoes an adaptation in order to optimize the utility it derives. There must be, Bergson concluded, a principle internal not only to organisms, but to all of life, that imparts commonality to the organic structures shared across diverse genetic lineages – a principle that he called *élan vital*: “According as [the *élan vital*] goes further and further in the direction of vision, it gives the simple pigmentary masses of a lower organism, or the rudimentary eye of a *Serpula*, or the slightly differentiated eye of the *Alciope*, or the marvelously perfected eye of the bird; but all these organs, unequal as is their complexity, necessarily present an equal coordination.”¹²¹

Bergson posited the *élan vital* as a metaphysical concept necessitated by a scientific problem. But the concept did not, he insisted, adhere to the bygone spiritualist doctrine of finality, which holds that an organic structure such as the eye develops in order to fulfill a particular function, namely sight.¹²² The *élan vital* does not impart the same evolutionary direction to species divergence, but instead endows evolution with the common stock out of which species diverge. It is on account of their commonality, and not their finality, that distinct species, Bergson believed, retain similar organic structures. But he went even further in his claim. Instead of reconciling the old spiritualist doctrine of finality with evolutionary theories, Bergson argued that both share the same mechanist presupposition: both hold that the eye develops by progressively accumulating its structural elements over generations, whether organized intentionality on account of an end, or accidentally on account of random variations. On this basis, Bergson succinctly argued that: “*Life does not proceed by the association and addition of elements, but by*

¹²¹ Henri Bergson, *Creative Evolution*, 95-96.

¹²² See Paul Janet, *Les causes finales* (Paris: Félix Alcan, 1876).

dissociation and division.”¹²³ The eyes of pecten, mulluscs and vertebrae are divergent expressions of the same *élan vital* connecting each species to the entirety of life, and thus bridging the chasms left gaping in biological data.

Bergson was motivated, as I have argued in my dissertation, by a critique of science as much as by a critique of the nineteenth-century spiritualism preceding him. He rode an intellectual wave that upended the Cousinian regime that Donald Kelly characterizes as “a particular way of doing philosophy, a so-called “eclectic” way, in which history in effect took precedence over unassisted and unencumbered reason and became “first philosophy.”¹²⁴ In place of history, science became Bergson’s “first philosophy.” But that is not to suggest that Bergson severed his philosophical ties to the past. The natural and human sciences generated metaphysical problems that spurred Bergson to formulate anew the spiritualist commitment to the free activity of consciousness. He did so by updating the notion of consciousness as a motor activity, originally developed by Biran, and by radicalizing the contingent continuity that Ravaisson had posited between nature and the will. Despite the originality and enduring force of the *élan vital*, Bergson drew the concept’s stakes from the controversies, I am suggesting, around which scientific spiritualists converged. The *élan vital* bore the residue of the concepts of motility, contingency, and pragmatism articulated across the intellectual arc of scientific spiritualism. As Bergson characterized the *élan vital*:

[A]ll life, animal and vegetable, seems in its essence like an effort to accumulate energy and then to let it flow into flexible channels, changeable in shape, at the end of which it will accomplish infinitely varied kinds of work. That is what the vital impetus, passing through matter, would fain to do all at once. It would succeed, no doubt, if its

¹²³ Ibid., 89, Bergson’s italics.

¹²⁴ Donald Kelley, *The Descent of Ideas, The History of Intellectual History* (Burlington, VT: Ashgate, 2002), 9.

power were unlimited, or if some reinforcement could come to it from without. But the impetus is finite, and it has been given once for all.¹²⁵

The passage lays bare three moments of scientific spiritualism:

Motility: The Biranian principle of motor effort informed Bergson's account of the *élan vital* as "an effort to accumulate energy," which flows through the "flexible channels" of individual species. Bergson's idea was that the *élan vital* generates novelty in the living world by confronting the resistance posed by concrete organisms. In a Biranian key, Bergson affirmed, "The physical order is 'automatic;' the vital order is, I will not say voluntary, but analogous to the order 'willed.'"126

Contingency: The *élan vital* injects contingency into evolution, engendering effects in excess of their cause. This principle was critical for Bergson to explain not only the commonalities shared across disparate lineages, but also the creative leaps by which divergent species develop parallel organic structures. Following Boutroux, who posited contingency as "that appearance of a new element which is the indispensable condition of a relation of causality,"127 Bergson conceived the *élan vital* as the catalyst of novelty within evolution.

Pragmatism: The *élan vital* imparts unity to organisms within a shared biological milieu, facilitating their capacity to derive utility from the environment, such that with greater development the *élan* "will accomplish infinitely varied kinds of work." Building upon

¹²⁵ Henri Bergson, *Creative Evolution*, 253-254.

¹²⁶ Ibid., 231.

¹²⁷ Émile Boutroux, *The Contingency of the Laws of Nature*, 30.

his account of action-oriented perception in *Matière et mémoire*, Bergson construed the eye as a paradigmatic evolutionary tool equipping organisms to intervene in the environment, rather than to form a representation of the environment.

In light of the arc that scientific spiritualism followed, it could be said that *L'Évolution créatrice* appeared in 1907 as a capstone of the movement, synthesizing the guiding moments of motility, contingency, and pragmatism. Bergson's opus could equally be seen, following one critic's account, as a fusion of pragmatism and science.¹²⁸ Indeed, the pragmatic value of the *élan vital* lay in its explanatory purchase over the aporias manifest in evolutionary biology. Far from having conceived the *élan vital* as a natural entity, understood as an animistic impetus or animating force, Bergson posited the concept as a conceptual tool. "[T]he 'vital' order," he wrote, "which is essentially creation, is manifested to us less in its essence than in some of its accidents, those which *imitate* the physical and geometrical order; like it, they present to us repetitions that make generalizations possible, and in that we have all that interests us."¹²⁹ The *élan vital*, in other words, does not appear before the natural scientist as a natural specimen or a positive fact. Rather, it is a metaphysical concept facilitating his or her generalizations, thus filling in the methodological lacuna of evolutionary theory. Bergson did not therefore impose a metaphysical resolution from without, but instead demonstrated that problems within the natural sciences motivated the concepts of motility, contingency, and pragmatism.

¹²⁸ Abel Rey, *La Philosophie moderne* (Paris: Ernest Flammarion, 1908), 31.

¹²⁹ Henri Bergson, *Creative Evolution*, 230.

L'Évolution créatrice catapulted Bergson onto the world stage. Audiences were already packing his lecture hall at the Collège de France, where philosophy students often complained that they had to stand outside just to catch a glimpse through the windows. Following 1907, Bergson's fame transcended France. He lectured across the continent, in Britain, as well as in America. The Comité France-Amérique, founded in 1909 to promote international cooperation through cultural exchange, facilitated his voyages across the Atlantic. The moment marked Bergson's transformation from philosopher to statesman.¹³⁰ As the Great War descended upon Europe, Bergson met with President Wilson in 1915 to encourage America's support, a cause represented at the time as a struggle between cultivated French spiritualism and imperialistic German materialism.¹³¹ With the former Prime Minister René Viviani, Bergson returned to the United States in April 1917 on the heels of America's declaration of war.¹³² Committed to forging international peace out of higher ideals, Bergson headed the International Committee on Intellectual Cooperation, an advisory committee to the League of Nations founded in 1922. Bergson's intellectual production persisted throughout his diplomatic career and up until his death in 1941. But the cultural landscape of France, and the intellectual debates fueling scientific spiritualism, largely subsided in the wake of World War I.

The conceptual problems animating scientific spiritualism endured for a distinct moment in French history, but only as long as the yoke of Cousin's anti-naturalist legacy and the rigidity of neo-Kantian intellectualism remained potent enough to stir a rebellion among young thinkers. Toward the end of his life, Bergson reflected on his incitement to

¹³⁰ See Philippe Soulez, *Bergson politique* (Paris: Presses universitaires de France, 1989).

¹³¹ Henry May Jr., *The End of American Innocence: A Study of the First Years of Our Own Time 1912-1917* (New York: Knopf, 1959), 78-79.

¹³² See Henri Bergson, Preface to, *La mission française en Amérique*, by René Viviani (Paris: Ernest Flammarion, 1917), 1-7.

study philosophy as a student at Lycée Condorcet, thanks to his professor, a “Cousinian schoolmaster,” who “did the immeasurable service of shielding me from the reigning influence of German thought, and prepared me to return one day to that most original and deepest of eclectics, Maine de Biran.”¹³³ Indeed, Bergson’s philosophical itinerary evinced the revolution against both Cousinian eclecticism and neo-Kantian intellectualism that guided the development of scientific spiritualism. Committed to the autonomy of consciousness and the reality of freedom, scientific spiritualists re-excavated the subterranean memory of Biran to establish a historical foothold from which to launch France’s intellectual heritage into a newfound dialogue with the scientific advancements reshaping modern Europe.

Intellectual and cultural historians of modern Europe have rendered the *fin de siècle* unthinkable without Bergson; yet his place within the history of scientific spiritualism, as I hope to have shown, casts into stark relief the unthought limits of *fin de siècle* historiography – specifically, the limits of an enduring narrative of a crisis in science that continues to frame the period. Far from having staged a revolt against positivism, scientific spiritualism blossomed because its guiding concepts – motility, contingency, and pragmatism – contained the promise of founding a higher, “spiritualist” positivism. It was thus not *despite* Bergsonian “irrationalism,” but *because* of his rapprochement between science and spiritualism, I am suggesting, that after World War I the philosophy of science would take off in France in the work of Georges Canguilhem, Jean Cavaillès, and Gaston Bachelard.¹³⁴ As long as the narrative of crisis continues to

¹³³ Jacques Chevalier, *Entretiens avec Bergson* (Paris: Plon, 1959), 38.

¹³⁴ Alan Schrift has made this observation, suggesting that the philosophy of science preoccupied French philosophy between the apex of *Bergsonisme* in the early twentieth century and the rise of phenomenology and existentialism in the early 1930s. “Is There Such a Thing as ‘French Philosophy’? Or why do we read

frame historiographies of the fin de siècle, Bergson's centrality to modern European thought will function as an all too convenient foil opposed to the emergence of the twentieth century. Rather, the Bergsonian moment was part of a dynamic and wide-reaching scientific spiritualism animated by the intellectual and cultural contestations over the meaning and scope of science. Contestation, and not crisis, I am urging, ought to structure a new narrative that frames French debates over science and spirit in deep continuity with the present.

The rapid influx of experimental psychology and evolutionary biology into France in the late nineteenth century sustained the social conditions in which scientific spiritualists thrived, motivated by the widespread aspiration to build upon these transnational advancements and to attain an expanded model of scientific practice. Born amidst the Third Republic's campaign to regenerate French society in the image of science and surpass the nation's perpetual foe across the Rhine, scientific spiritualism refracted the state's investment in technological progress. Rising generations of professors charged with inculcating a new scientific curriculum in secondary education took hold of and reoriented the social pressures jeopardizing the metaphysical methods they had inherited. These thinkers demonstrated that the ascendance of science did not precipitate the death of metaphysics, but inspired a new metaphysics tailored to the pragmatic and inventive activity of consciousness. Scientific spiritualism, forged from a renewal of French spiritualism, might enjoy its own renewal today, as humanists and social scientists appropriate contemporary scientific advancements as a springboard to invigorate their disciplinary methods.

the French so badly?,' in *After the Deluge: New Perspectives on the Intellectual and Cultural History of Postwar France*, ed. Julian Bourg (Lanham: Lexington Books, 2004), 21-48.

Epilogue

Bergson Today Historical Experience and the Neurosciences

In 1983, Jean-Pierre Changeux, today France's leading neuroscientist, argued in his *L'Homme neuronal* that contemporary advances in the neurosciences had rendered Henri Bergson's critical engagements with the nascent experimental psychology obsolete. Changeux took aim at *Matière et mémoire* (1896), in which Bergson critiqued the reductionism of early brain science on the grounds that "the nervous system has nothing in the way of an apparatus to make or even to prepare representations."¹ Bergson contended that consciousness could not be localized in cerebral tissues. Yet rather than reject the emergent sciences of his time, Bergson built upon their research program to demonstrate that the limitations facing the scientific study of the brain motivate a distinctly qualitative study of consciousness. On his account, thought generally, and human creativity in particular, surpass physiology. While France's Nobel prize-winning philosopher left a legacy formidable enough for Changeux to take seriously, he nevertheless believed that Bergson's ideas remained tethered to the outdated sciences of the late nineteenth century. "Man no longer has a need for the "Spirit",” Changeux implored, "it is enough for him to be Neuronal Man.”²

Like many scientists and philosophers of the late nineteenth century, Bergson compared the brain to a central telephone exchange, which "plays the simple role of a

¹ Henri Bergson, *Matter and Memory*, trans. Margaret Paul and W. Scott Palmer, 8th ed. (Brooklyn: Zone Books, 2008), 31; modified translation cited in Jean-Pierre Changeux, *Neuronal Man*, trans. Laurence Garey (Princeton, NJ: Princeton University Press, 1985), 127; originally published as *L'homme neuronal* (Paris: Fayard, 1983).

² Jean-Pierre Changeux, *Neuronal Man*, 169.

conductor that transmits, allocates, or inhibits movement.”³ Now functional magnetic resonance imaging (fMRI) represents the brain according to the changing magnetic properties of oxygenated blood flows. Its well-known images of illuminated neural passageways have allowed neuroscientists to identify the neuronal correlates of conscious activity. These images furnish a figure of the brain far more advanced than the central telephone exchange. It would therefore seem, in the light of modern neuroimaging, that Bergson’s insight into the creative activity of consciousness could now be neatly archived in the dusty volumes of fin de siècle thought.

Since his 1983 critique, however, Changeux has come to offer a more generous appraisal of Bergson. In *L’Homme de vérité* (2002) he affirms that, “The brain needs to be seen... as an open, motivated, and self-organizing system continually engaged in the exploration of its environment—a quality that recalls Bergson’s theme in *La Pensée et le mouvant*.”⁴ The neuroscientific figure of the brain, in other words, now appears more Bergsonian than ever.

Neuroscientific research into the epigenetic evolution of neuronal networks during humans’ lifespans has shone light on the dynamic ways in which the brain develops through its interactions with the environment. Further insight into the plasticity of neurons demonstrates how they shape conscious activity as much as they are reciprocally shaped by it. Both domains, epigenesis and neuronal plasticity, have helped to overthrow the understanding of the brain as a material substratum – like the telephone exchange – or as an organ that determines conscious activity, an understanding that has

³ Henri Bergson, *Matter and Memory*, 40.

⁴ Jean-Pierre Changeux, *The Physiology of Truth: Neuroscience and Human Knowledge*, trans. M.B. DeBevoise (Cambridge: The Belknap Press, 2002), 32; originally published as *L’Homme de vérité* (Paris: Odile Jacob, 2002).

persisted since the emergence of the brain sciences in the late nineteenth century. In order to furnish a figure of the brain that can adequately represent its self-organizing and creative capacities, these domains have motivated a curious return to Bergson.

French philosopher Catherine Malabou, for example, explicitly invokes Bergson's idea that consciousness surpasses the brain's physiology to explain neuronal plasticity: "the invariable contrivance of consciousness... from its most humble origin in elementary living forms, is to convert physical determinism to its own ends, or rather to elude the law of conservation of energy while obtaining from matter a fabrication of explosives, ever intenser and more utilizable."⁵ Malabou suggests that neuronal plasticity verifies Bergson's figure of consciousness as an explosive, like "the slight pressure of the finger of the hair-trigger of a pistol." Malabou concludes, "It is thus that one must think the transition from the neuronal to the mental."⁶

If the neurosciences have discredited Bergson's account of consciousness as a spiritual dimension of human experience irreducible to the brain, it is only because, I want to suggest, neuroscientists have integrated Bergson's very account into their understanding of the brain. The contemporary sciences of the brain have paradoxically managed to revitalize Bergson's thought in the present, rather than consign it to history. Indeed, several neuroscientists have affirmed Bergson's continuing relevance.⁷ But now as neuroscientific insights spread across the humanities and social sciences, his ideas

⁵ Henri Bergson, "The Soul and the Body" in *Mind Energy: Lectures and Essays*, trans. H. Wildon Carr (London: Macmillan, 1920), 35; originally published as "L'âme et le corps" in *L'Énergie spirituelle. Essais et conférences* (Paris: Presses universitaires de France, 1919); cited in Catherine Malabou, *What Should We Do With Our Brain?*, trans. Sebastian Rand (New York: Fordham University Press, 2008), 73; originally published as *Que faire de notre cerveau?* (Paris: Bayard, 2004).

⁶ Catherine Malabou, *What Should We Do With Our Brain?*, 73.

⁷ See Andrew C. Papanicolaou and Pete A.Y. Gunter, eds., *Bergson and Modern Thought: Towards a Unified Science* (Chur, Switzerland: Harwood, 1987); Phillippe Gallois and Gérald Forzy, eds., *Bergson et les neurosciences* (Le Plessis-Robinson: Institut Synthélabo pour le progrès de la connaissance, 1997).

offer a doubly relevant perspective from which to take stock of the extensive uses of the neurosciences today.

This is especially the case in history. Historians as eminent as Lynn Hunt and Daniel Lord Smail have called for a new “neurohistory.” Their project aims to integrate neuroscientific research into historiographical methods applicable across the writing of history, from the prehistory of biological evolution to the microhistory of particular historical actors. Neurohistorians believe that the neurosciences reveal certain facts about the human brain that can help historians to develop a more complete account of historical actors’ experiences.

Others like William Reddy and Barbara Rosenwein have mined the literature in the affective neurosciences in support of the history of the emotions, now an established subfield in its own right. It has a journal, *Passions in Context: International Journal for the History and Theory of Emotions*, as well as several centers for the history of the emotions at Queen Mary, University of London, the Max Planck Institute for Human Development in Berlin, and the Universities of Brisbane and Melbourne. Not all historians of the emotions appropriate neuroscientific research. But those following Reddy’s program share neurohistorians’ aim to enrich their understanding of historical actors’ experiences.

Given the current historiographical terrain, these two programs of neurohistory and the history of the emotions represent the two predominant attempts to stage a dialogue between history and the sciences of the brain, including the neurosciences and evolutionary biology. Although the specializations of neurohistorians and historians of the emotions widely diverge, they all are united in their aim to advance a new paradigm

for history on the basis of the rapidly advancing but still incomplete experimental data of these contemporary sciences.

It is by no means new for historians to revamp their methodologies in light of advancements in the natural and human sciences. In 1938 Lucien Febvre posed the question to his compatriots of the *Annales* school, “how can we as historians make use of psychology which is the product of observation carried out on twentieth-century men, in order to interpret the actions of the men of the past?”⁸ What makes the programs of neurohistory and the history of emotions new is their use of the neurosciences in particular, and their participation in a general “neurologization” across the humanities and social sciences. The prefix, “neuro-” now appears in fields such as neuroethics, neuroaesthetics, neuroeconomics, and neuropolitics, all of which, according to Fernando Vidal and Francisco Ortega, profit from “the prestige of neuroimages,” combining “the epistemic authority and sensory appeal of images in general with the particular power of the neurological.”⁹ Indeed, the brain has become the frontier of biomedical research as much as it now frames the horizon of human experience. President Barack Obama unveiled the Brain Activity Map project on April 2, 2013, an investment of 100 million dollars to identify the single-celled brain circuits composing neuronal tissue. And on October 6, 2013 European neuroscientists inaugurated the Human Brain Project, an even more expansive 1.2 billion euro investment to map the brain’s 100 billion neurons. Invoking the figure of the brain promises to amplify the appeal of research in the

⁸ Lucien Febvre, “History and psychology” in *A New Kind of History: From the Writings of Febvre*, ed. Peter Burke (New York: Harper & Row, 1973), 5.

⁹ Fernando Vidal and Francisco Ortega, “Approaching the Neurocultural Spectrum: An Introduction” in *Neurocultures. Glimpses into an Expanding Universe*, ed. Francisco Ortega and Fernando Vidal (Frankfurt: Peter Lang GmbH, 2011), 14.

humanities and social science scholars. It was perhaps only a matter of time until historians would catch on.

The most forceful critics among historians include Ruth Leys and Fernando Vidal. Both take aim at the reductionism of neurocultures generally and the uses of the neurosciences for historiography in particular. Leys identifies “anti-intentionalism” as the commitment uniting humanities and social science scholars who employ the neurosciences to reveal, “a set of innate, automatically triggered brain-body behaviors and expressions operating outside the domain of consciousness and intentional action.”¹⁰ For Vidal, much “neurologized” scholarship relies on the problematic reductionist presupposition that “the mind is what the brain does.”¹¹

This epilogue stages a historical intervention into the present debate between historians inspired by and critical of the neurosciences. Scientific spiritualists’ engagements with the emergent sciences of the late nineteenth century, among which Bergson’s stands out as the most vigorous, offers a perspective from which to evaluate contemporary historians’ engagements with the mature sciences of the twenty-first century. My aim is to bring the preceding chapters into critical dialogue with the present so that the history of scientific spiritualism might help steer a course for contemporary historiography.

It is scientific spiritualists’ critical point of view that makes their intervention relevant in the present debate. Although they acknowledged the insights of experimental psychology and evolutionary biology, scientific spiritualists were deeply critical of the reductionism attending these sciences. Between 1874 and 1907, these thinkers addressed,

¹⁰ Ruth Leys, “The Turn to Affect: A Critique,” *Critical Inquiry* 37 (2011): 465.

¹¹ Fernando Vidal, “La Neuroesthétique, un esthétisme scientifique,” *Revue d’Histoire des Sciences Humaines* 2, no. 25 (2011): 239-264.

disputed, and overcame many of the conceptual problems still at stake in historians' debate over the significance and utility of the neurosciences. Moreover, because the sciences that they engaged were still nascent, scientific spiritualists were unable to lean on the theoretical assumptions and cultural prestige now enjoyed by the contemporary brain sciences. In addition to Bergson, scientific spiritualists such as Maurice Blondel, Émile Boutroux, Alfred Fouillée, and Édouard Le Roy felt the demand to articulate the stakes of their philosophical engagement with the emerging sciences in no uncertain terms. The clarity and originality with which these thinkers advanced their project can thus help historians in the present to reappraise the conceptual check that they hope to cash by investing their work in neuroscientific research.

In what follows, I will first present the common interest in the neurosciences motivating both historiographical programs, neurohistory and the history of the emotions – namely, to restore a thick account of historical actors' experience neglected by the alleged excesses of the linguistic turn. I will then argue why neurohistory is problematic and why the history of the emotions is promising. The former program employs neuroscientific research to reveal the somatic, nonconscious experiences of historical actors. I bring the arguments of Leys and Vidal to bear on the reductionist consequences of neurohistorians' work, which occasions the intervention that I would like to stage.

Although Leys and Vidal acutely discern the pitfalls of the neuroscientific paradigm, neither offers a corrective to its uncritical use by historians. I turn to the history of scientific spiritualism in order to contribute a positive dimension to these critics' incisive critiques. In response to what they saw as the reductionism of consciousness resulting from the emergent psychology, scientific spiritualists creatively

appropriated scientific research to articulate an expanded account of consciousness. Their aim, as Bergson wrote in *L'Évolution créatrice* (1907), was to leap beyond the limits of scientific research, “in order to superpose on scientific truth a knowledge of another kind, which may be called metaphysical. Thus combined, all our knowledge, both scientific and metaphysical, is heightened.”¹² As long as historians continue to appropriate neuroscientific literature, then historians of the emotions, I want to suggest, offer the most promising program for doing so. By constructively mobilizing the neurosciences, they expand our understanding of historical experience while avoiding the pitfalls that Leys and Vidal shrewdly discern. In this way, the history of scientific spiritualists’ engagement with the emergent sciences of the late nineteenth century can help to guide contemporary historians’ engagements with the sciences of the twenty-first century.

Seeking a New Paradigm Beyond the Linguistic Turn

Although neurohistorians and historians of the emotions hardly agree about methodology, they do share in a wide trend among historians of all stripes seeking to find a new paradigm in the wake of the linguistic turn. Richard Rorty originally identified the linguistic turn as a method embraced in Anglo-American philosophy.¹³ In historiography the term designates a framework for understanding society and culture as a system of signs, which came to be associated with the work the seminal figures Claude Levi-Strauss, Michel Foucault, Jacques Derrida. Their insights into structural semiotics, the

¹² Henri Bergson, *Creative Evolution*, trans. Arthur Mitchell (New York: Henry Holt, 1911), 199; originally published as *L'Évolution créatrice* (Paris: Félix Alcan, 1907).

¹³ Richard Rorty, *The Linguistic Turn: Recent Essays in Philosophical Method* (Chicago: University of Chicago Press, 1967).

archaeology of discourses, and literary theory coalesced from 1970s through 1990 into a linguistic and constructionist methodology. It directed historians to research the modes of cultural representation, the formations of knowledge out of power relations, and the play of topoi in texts. Traditional concepts of linear historical causality underwent heightened scrutiny as did Marxist concepts of the material base of social and political transformation. Historical scholarship duly benefited by proliferating the loci of historical agents' identities beyond class and nation and by foregoing the search for pure origins. Yet, many historians now take these fruitful lessons to have, at best, exhausted their utility, and at worst, engendered a surfeit of linguistic constructionism untethered to the material past.

Even in its heyday, many historians criticized the linguistic turn. Martin Jay argued that there were several linguistic approaches to history, but no uniform turn.¹⁴ John Toews criticized linguistic theorists' claim "that the creation of meaning is impersonal, operating "behind the backs" of language users whose linguistic actions can merely exemplify the rules and procedures of languages they inhabit but do not control."¹⁵ Historians inspired by feminist theory criticized what they saw as neglect of the material conditions of society and culture and a general failure to ground a meaningful concept of historical agency. In the face of critics, Gabrielle Spiegel endorsed a moderated approach to linguistic methods tempered by a return to their semiotic forefather, Ferdinand Saussure, who, she believed, could rescue a workable concept of

¹⁴ Martin Jay, "Should Intellectual History Take a Linguistic Turn? Reflections on the Habermas-Gadamer Debate" in *Modern European Intellectual History: Reappraisals and New Perspectives*, ed. Dominick LaCapra and Steven L. Kaplan (Ithaca, N.Y: Cornell University Press, 1982), 86–110.

¹⁵ John Toews, "Intellectual History after the Linguistic Turn: The Autonomy of Meaning and the Irreducibility of Experience," *American Historical Review* 92, no. 4 (1987): 879-907.

human agency.¹⁶ By the late 1990s, historians began to discuss the linguistic turn in the past tense. Lynn Hunt and Victoria Bonnell called for a new mode of historical explanation, which could go beyond symbolic and linguistic connections.¹⁷ Their aspiration was not only to set the past in a sturdier framework, but also to overcome the skeptical impasses – questions such as whether texts can find an anchor in the past – that linguistic theories often engendered in the hands of historians.

“Conveniently,” Michael L. Fitzhugh and William H. Leckie, Jr. wrote in 2001, “neuroscience and linguistics... have now combined in a massive interdisciplinary endeavor called “cognitive science” which seeks to settle the major questions of human epistemology.”¹⁸ Research in the field could lay historians’ theoretical disputes to rest. According to Fitzhugh and Leckie Jr., cognitive science could help historians appreciate language as a communicative tool developed from human physiology, and not treat language as a medium that constructs experience.¹⁹ Cognitive science, in this sense, provides a new epistemological framework to elucidate historians’ inescapable relationship to language. The linguistic turn *tout court* need not be abandoned, so it is now argued among neurohistorians, but the constructionist claims of its theoretical canon can be undercut. Daniel Lord Smail explicitly adopts this “biological turn,”²⁰ and Lynn Hunt endorses it as a means to appreciate how historical reality “is also built through

¹⁶ Gabrielle Spiegel, “History, Historicism, and the Social Logic of the Text in the Middle Ages,” *Speculum* 65, no. 1 (1990): 59-86.

¹⁷ Victoria E. Bonnell and Lynn Hunt, Introduction to *Beyond the Cultural Turn*, ed. Victoria E. Bonnell and Lynn Hunt (Berkeley: University of California Press, 1999), 1-34.

¹⁸ Michael L. Fitzhugh and William H. Leckie, Jr., “Agency, Postmodernism, and the Causes of Change,” *History and Theory* 40, no. 4 (2001): 75.

¹⁹ *Ibid.*, 79.

²⁰ Daniel Lord Smail, *On Deep History and the Brain* (Berkeley: University of California Press, 2008), 114.

embodiment, gesture, facial expression, and feelings, that is, through nonlinguistic modes of communication that have their own logics.”²¹

Whether or not historical writing undergoes a new turn – a concept recently criticized for outlasting its use²² – the widely perceived exhaustion of the linguistic turn indicates that historians are ready to rethink their epistemological relationship to historical documents. In particular, they are ready to restore a richer account of historical experience against what they see as a formerly myopic focus on historical subjects’ relation to language. The neurosciences offer one means to do so.

It may be surprising that historians on whom the linguistic turn exerted such a formidable influence, with the ire it cast over essentializing biological claims, would seek recourse in biological methods. It is especially surprising in the case of Hunt and Rosenwein, who acknowledge the strong influence of feminist theory on their work. Reflecting on the first rule that defined “good theory” at the height of the linguistic turn, Eve Kosofsky Sedgwick and Adam Frank stipulated, “The distance of any such account from a biological basis is assumed to correlate near-precisely with its potential for doing justice to difference (individual, historical and cross-cultural), to contingency, to performative force and to the possibility of change.”²³ To be sure, historians interested in the neurosciences do not wish to revert to a notion of biology-as-destiny so vigorously critiqued by feminist theorists. Developments in epigenesis and neuronal plasticity instead offer a picture of the brain and a more general biological framework that help to bring sexuality into the domain of nature while doing justice to difference and

²¹ Lynn Hunt, “The Experience of Revolution,” *French Historical Studies* 32, no. 4 (2009): 674.

²² See “AHR forum: Historiographic “Turns” in Critical Perspective,” *American Historical Review* 117, no. 3 (2012).

²³ Eve Kosofsky Sedgwick and Adam Frank, *Touching, Feeling: Affect, Pedagogy, Performativity* (Durham, NC: Duke University Press, 2003), 93.

contingency. As Constantina Papoulias and Felicity Callard observe, “borrowing from neuroscience is enabled... insofar as certain writings in neuroscience describe a fluid materiality of excitable neural networks, capable of disturbing the role of foundations in general and the distinction between nature and culture in particular.”²⁴ Papoulias and Callard ultimately see the neurologization of feminist theory, however, as a pyrrhic victory. While the new vision of nature unbound by ironclad “natural laws” helps to overcome a prior antipathy toward biology, it is drawn from what Papoulias and Callard take to be uncritical distortions of popular neuroscientific literature. As a result, concepts still subject to contestation in the scientific community, such as affect, sensation, and consciousness, appear as settled when transported into humanities and social science scholarship.

In a recent series of interviews, historians of the emotions reflect on their own efforts to overcome the linguistic conception of historical epistemology. Reddy straightforwardly endorses the brain sciences as a “useful corrective to the excesses of the “linguistic turn”.”²⁵ Jan Plamper recalls that he felt motivated to explore the neurosciences in the early 2000s in order to find “approaches that would restore the visceral qualities of bodily experience to their rightful place, approaches that would also allow for stronger notions of causality than “discursive shifts” or the like.”²⁶ But their interest in the neurosciences does not amount to an outright rejection of the linguistic turn. Nicole Eustace, echoing the program of Fitzhugh and Leckie Jr., suggests that linguistic and biological approaches are not mutually-exclusive, since the “neurochemical

²⁴ Constantina Papoulias and Felicity Callard, “Biology’s Gift: Interrogating the Turn to Affect,” *Body & Society* 16, no. 29 (2010): 35.

²⁵ “AHR Conversation: The Historical Study of Emotions,” *American Historical Review* 117, no. 5 (2012): 1508.

²⁶ *Ibid.*, 1492.

perception of emotion is formed through language.”²⁷ Rosenwein takes her interest in the neurosciences to follow from the lessons of the linguistic turn. And Eugenia Lean warns against rejecting the linguistic turn since one of its chief merits was to have centered historians’ work on subjectivity. Language, Lean insists, remains a productive starting point for interrogating historical actors’ experiences.²⁸

These historians’ shared motivation confirms Spiegel’s prognosis that “experience and practice” will be the master concepts for a new historiographical paradigm beyond the linguistic turn.²⁹ Spiegel contends that the stakes confronting historiography after the linguistic turn hinge on whether a new paradigm can rejuvenate a sense of historical actors’ phenomenal contact with the material world. At the same time, she affirms, a renewed appreciation for historical actors’ purposeful lives and intentional actions can continue to profit from a close analysis of structural context. As Spiegel points out, the excessive deflation of historical actors’ experience during the linguistic turn can be traced back to the initial abandonment of phenomenology by structuralism. Spiegel highlights theorists of social practice, such as Mark Bevir, Marshall Sahlins, and William Sewell Jr., as well as their predecessors, Pierre Bourdieu and Michel de Certeau, as the leaders of a new paradigm, who, in her words, “begin from a belief in individual perception as the agent’s own source of knowledge about, and action in, the world, a perception mediated and perhaps constrained, but *not* wholly controlled, by the cultural scaffolding or conceptual schemes within which it takes place.”³⁰

²⁷ Ibid., 1506.

²⁸ Ibid., 1491.

²⁹ Gabrielle M. Spiegel, Introduction to *Practicing History: New Directions in Historical Writing after the Linguistic Turn*, ed. Gabriel Spiegel (New York: Routledge, 2005), 11.

³⁰ Ibid., 13.

None of these theorists, to be sure, integrate the neurosciences into their work. What I want to draw attention to, however, is the fact that those who do share the same objective of enriching their accounts of historical agents' experience. The appeal to experience unites neurohistorians with historians of the emotions, as much as with a wide swath of the discipline seeking to find a new paradigm sensitive to the lived dimension of the past.

The neurosciences in no way provide the only means to remedy the excesses of the linguistic turn. But whether they succeed in doing so, as Spiegel suggests, depends less on whether they overthrow the linguistic turn than on whether they take advantage of its methods to articulate a more robust sense of historical experience. "If most historians—especially those who still believe in the power and utility of the linguistic turn—have no desire to return to an "objective" social science model of history, that is, to "save the phenomena," many are nonetheless engaging in a widespread attempt to save the phenomenological."³¹ Such are the stakes that both programs, neurohistory and the history of emotions, must confront in their respective ambitions to rejuvenate historical actors' experience.

The Neurohistorical Program

Daniel Lord Smail's ambitious neurohistorical program takes its conceptual point of departure from what he sees as historians' outmoded opposition between culture and biology. The opposition informs the epistemological separation between the kinds of

³¹ Gabrielle M. Spiegel, "Comment on *A Crooked Line From Cultural History to the History of Society*, by Geoff Eley," *American Historical Review* 113, no. 2 (2008): 412.

objects that history and biology are respectively meant to investigate as well as methodological distinction between the models of causality on which each discipline depends. On this approach, the biological development of the human species laid the conditions in “deep history” from which culture emerged in “shallow history.” On the contrary, Smail argues that neuroscientific research reveals the opposite relationship: changes in culture enable changes in biology. As a result, biological evolution deserves to be brought into the epistemological domain of historical research. The transition between deep and shallow history, Smail contends, is marked by continuity rather than rupture.

Smail finds support for his thesis in the central concepts of exaptation in evolutionary biology and neuronal plasticity in the neurosciences. An exaptation, as Steven Jay Gould and Elizabeth Vrba originally explained, is an evolutionary trait whose purpose exceeds the original reason for its emergence.³² The trait cannot be explained as an adaptation to the environment since its function surpasses whatever adaptive utility it may have initially served. Sex, for example, is exaptive in that it secures social bonds and reproduces cultural desires, both of which exceed its original function of procreation. Smail goes even further and contends that all of culture constitutes a constellation of exaptations.

Humans’ cultural behavior has the power to influence their biology thanks to the concept of neuronal plasticity. The synaptic connections between the brain’s neurons, as Smail highlights, form in accord with human activity. Because the neuronal structures of humans’ brains have not completely grown at birth, physiological changes during the course of life, especially in its early stages, contribute to the brain’s organization. The

³² Stephen Jay Gould and Elizabeth Vrba, “Exaptation: A Missing Term in the Science of Form,” *Paleobiology* 8 (1981): 4-15.

consequence of neuronal plasticity, as Changeux affirms, is sweeping: “This basic fact contradicts the naive picture of the brain as a sort of rigid automaton, made up exclusively of neuronal cogs and wheels whose operation is wholly determined in advance.”³³ Thanks to the neurons’ plasticity, the exaptive traits that emerge over the course of evolution can reciprocally influence humans’ biology – a process that evolutionary biologists call the “Baldwin effect.”

The twin concepts of exaptation and plasticity go together in Smail’s account of the co-determining relationship between culture and biology. As a consequence, Smail and neurohistorians generally do not fear that their program is reductionist, since their picture of biology is not meant to directly determine historical events. As Edmund Russell contends in his anthology of neurohistorical scholarship, “The main contribution of neuroscience is not to undermine the importance of culture in human history, but rather to open the black box of the brain to better understand how ideas develop, are processed, and affect behavior.”³⁴

There are wide-reaching implications for historians’ epistemological relationship to the past. Smail believes that historians who treat textual documents as their exclusive link to dead humans fail to update their discipline on the basis of evolutionary biology and the neurosciences. “Textual documents,” as historians of non-literate societies have shown, include sources that are not written, such as artifacts and fossils. Physiology, Smail urges, is an equally important link not only to past human actors, but to humans’ evolutionary predecessors as well. In this light, DNA constitutes a document admissible as historical evidence. Michael McCormick, Smail’s colleague at Harvard, encourages

³³ Jean-Pierre Changeux, *The Physiology of Truth*, 26.

³⁴ Edmund Russell, “How Can Neurohistory Help Us Understand the Past?” in *Environment, Culture, and the Brain. New Explorations in Neurohistory* (Munich: Rachel Carson Center Perspectives, 2012), 11.

medieval historians to recover the migratory patterns and economic structures from the traces of DNA available in sources such as the parchment of manuscripts. The hides on which medieval Europeans wrote contain DNA traces that can be compared to the bovine genomes of particular regions, indicating the movement and commerce of the materials used for writing. “Microbiology may well produce the most historical surprises in coming years” McCormick suggests, “as it clarifies, at the molecular level, the *lives* and economic *experiences* of medieval men and women.”³⁵ History thus moves closer to archaeology, as DNA becomes a key document to unlock the experiences of historical actors.

Neuro-imaging technologies such electroencephalographs (EEG) and fMRI scans also constitute a document linking historians to the past. Smail’s particular interest is that they exhibit how the brain responds to psychotropic mechanisms and can thereby reveal the history of psychotropic alterations. There are a host of psychotropic mechanisms – caffeine, cocaine, television, and the Internet, for example – all defined by their capacity to affect humans’ moods. The changes that different psychotropic mechanisms introduce into history occur at the level of humans’ stimulus-response patterns. According to Smail, these mechanisms have a cultural history that also affects humans’ brain chemistry. On the one hand, using caffeine, cocaine, television, and the Internet, is an exaptation because these mechanisms trigger hard-wired pleasure centers, while at the same they have their own cultural history. They are pleasure-inducing mechanisms circulated, produced, used, and abused, in particular cultural contexts. On the other hand, these psychotropics alter the brain’s chemistry, thanks to neuronal plasticity, so as to induce

³⁵ Michael McCormick, “Early Medieval Economic History in the Twenty-First Century” in *The Long Morning of Medieval Europe*, eds. Jennifer R. Davis and Michael McCormick (Burlington, VT: Ashgate, 2008), 97, my emphasis.

new biological dispositions in evolution. Successive generations become accustomed to using certain psychotropics and even come to depend on them physiologically. A guiding objective of Smail's neurohistory is to demonstrate how the cultural history of psychotropic mechanisms affects humans' biological history, thereby thoroughly imbricating history's cultural and biological dimensions.

Psychotropic alterations link the present to both deep and shallow history. Dominance hierarchies have their origin, according to Smail, in primate societies where female baboons terrorize subservient females. The terrorizing females amplify the stress experienced by the subservient females, altering their hormones to effectively instill a biological capacity to feel submission. Post-lithic societies have exploited these capacities for submission through more modern hierarchies, from pre-modern agriculture to post-modern capitalism. But it is at bottom the capacity to experience submission physiologically that links power structures in the present to primitive hierarchies in the past.³⁶

Perhaps Smail's most daring claim follows from his application of neurohistory to the origins of the Enlightenment. According to him, the psychotropic substances imported into Europe in the late seventeenth century such as coffee, sugar, chocolate, and tobacco laid the neuro-chemical conditions for the explosion in ideas characterizing the period. The emergence of the public sphere depended not only on the formation of reading communities in cafés and salons, but also on the consumption of psychotropic substances therein, stirring the bourgeoisie to banter and exchange ideas. These psychotropics were of a particular kind, what Smail calls "autotropic" – they alter one's own stimulus-response patterns. The significance of his argument depends on their

³⁶ Daniel Lord Smail, *On Deep History and the Brain*, 166-168.

difference from “teletropic” mechanisms, which humans employ to alter the stimulus-response patterns of others. The circulation of autotropic mechanisms in the seventeenth century accounts for the decline in teletropic mechanisms employed by Christian authorities: “where individuals relied on religion and ritual as sources of dopamine and other chemical messengers, they turned increasingly to items of consumption, giving up God in favor of mammon.”³⁷ The conceptual payoff of Smail’s neurohistory of the Enlightenment is to recast its emergence as a psychotropic alteration. Or simply stated, Europeans got high.

Smail expands the scope and methods of his neurohistorical project in his recently published collaboration with the anthropologist Andrew Shryock, *Deep History* (2011). The anthology brings together other historians and anthropologists, as well as biologists and geographers, to elaborate on the linkages connecting shallow history to deep history. Smail reiterates his argument that psychotropic alteration ties primate life, beginning with *Homo habilis* some 2.6 million years ago, to contemporary human communities. Again, the framework within which Smail and Shryock present their project aims to unsettle historians’ outmoded opposition to biology, such that “If the past in question predates the emergence of literature state societies, it falls under the jurisdiction of archaeologists and biological anthropologists, whose methods of inquiry are scientific, not historical.”³⁸ The new kinds of documents that *Deep History* considers include genetic evidence, primate eating habits, human fossil records, radiocarbon dating, and instrumental neutron activation analysis.

³⁷ Ibid., 184-185.

³⁸ Daniel Lord Smail and Andrew Shryock, eds., *Deep History: The Architecture of Past and Present* (Berkeley: University of California Press, 2011), 8.

Lynn Hunt champions the methods of neurohistory to enrich historical actors' experience in her own specialization, the French Revolution. The previous paradigms used to understand the history of the French Revolution, such as Marxism and neo-Tocquevillian analysis, have been exhausted, so Hunt claims. The new paradigm must answer what Hunt takes to be a new question: how did French men and women themselves *experience* the revolution? The question motivates Hunt to "urge a reconceptualization of individual experience based on perspectives derived from recent research in neuroscience."³⁹ These perspectives, she claims, illuminate a mode of selfhood that synthesizes rational and emotional, conscious and unconscious processes, effectively unraveling the dualism of mind and body.

By foregrounding this mode of selfhood, historians can appreciate how historical actors perceived the new visual culture of the Revolution. Hunt's aspiration is to build on art historians' research into the new print forms produced during the Revolutionary period to further understand the ways in which "prints had direct bodily effects via both the unconscious bodily emotions and conscious embodied feelings, and they had those effects not only because of their putative content but also because of their size, their look, and their potential for collective sharing with other viewers."⁴⁰ Historical actors' subjective perceptions of the unique qualities of their Revolutionary environment, as Hunt writes elsewhere, "rested on new cultural forms that transformed the experience of time, space, and the apprehension of individuality," all of which, she adds, "did not necessarily take place on a conscious level."⁴¹ The coherence of Hunt's project depends

³⁹ Hunt, "The Experience of Revolution," 672.

⁴⁰ *Ibid.*, 677.

⁴¹ Lynn Hunt, "The French Revolution in Global Context" in *The Age of Revolutions in Global Context, c. 1760-1840*, ed. David Armitage and Sanjay Subrahmanyam (New York: Palgrave, 2010), 35.

on the conceptual division she draws between two levels of experience: feelings within consciousness and bodily effects outside of consciousness. She challenges historians to use the methods of neurohistory not merely to document how historical actors represented Revolutionary visual culture on the former level, but also to document how their bodies unconsciously felt on the latter level. The neurosciences thus serve to uncover how the bodies of French men and women reacted, rather than what their minds thought.

Hunt's project follows from her earlier interest in the origins of human rights during the eighteenth century. In *Inventing Human Rights: A History* (2007), Hunt argues that new reading practices in the mass public helped to generate widespread interest in a universal concept of humanity. Epistolary novels induced readers to sympathize with the fictional protagonist, and accounts of torture drew readers into the lives of remote prisoners. Diaries and letters thus provided reading communities with a newfound access to characters' and writers' experiences. These new forms of writing did not produce sympathetic identification *sui generis*. Rather, Hunt contends, the reading practices enabled by these forms of writing mobilized the pre-existing human capacity for sympathetic feeling and elevated it to a wider universal plane: "reading accounts of torture or epistolary novels had physical effects that translated into brain changes and came back out as new concepts about the organization of social and political life."⁴²

True to the neurohistorical program, *Inventing Human Rights* demonstrates how cultural practice produced biological effects that in turn changed the course of human history. Hunt does so by setting about the straightforward historical task of interpreting and contextualizing how historical actors read literature. At the same time, she sets

⁴² Lynn Hunt, *Inventing Human Rights: A History* (New York: Norton, 2007), 33.

herself the distinctly neurohistorical task of drawing from neuroscientific observations of what the brain does when humans read literature.⁴³ What follows is Hunt's claim that the emergence of a particular concept of human rights depended less on the political commitments of its ideological proponents and more on physiological experiences "within individual minds."⁴⁴

Smail and Hunt share the common objective of explaining historical actors' experience on the basis of neurophysiological facts about the brain. These facts are supposed to be unconscious, or as Smail and Hunt frequently seem to imply, nonconscious, since they belong exclusively to the brain (and thus are not unconscious in the psychoanalytic sense of drives). In order to pay attention to these facts, neurohistorians appropriate neuroscientific literature, which they take to reveal a register of experience impenetrable by conventional modes of historical interpretation. The ambition is to explain experience in terms of what it was like inside historical actors – a project that one commentator aptly calls "history from within."⁴⁵

Does it make sense to call the neurophysiological processes unfolding outside of consciousness *experiences*? And do the neurosciences even support such a notion of experience? If so, might neurohistorians risk reducing historical actors' conscious practices to the work of their brains? Answering these questions requires a closer examination of the epistemological and methodological commitments of the neurohistorical program.

⁴³ Hunt draws her observations from a single article, Jean Decety and Philip L. Jackson, "The Functional Architecture of Human Empathy," *Behavioral and Cognitive Neuroscience Review* 3 (2004): 71-100.

⁴⁴ Lynn Hunt, *Inventing Human Rights: A History*, 34.

⁴⁵ Jeremy Trevelyan Burman, "History from Within? Contextualizing the New Neurohistory and Seeking Its Methods," *History of Psychology* 15, no. 1 (2012): 84-99.

Neurocultures in Critical Perspective

Neurohistorians argue that they evade the charge of reductionism thanks to a dynamic understanding of the brain borrowed from the neurosciences. It is on this basis that they claim to unite culture and biology as reciprocally determining. But the stakes of their project turn on whether or not the brain, despite its creative capacities, can be the locus of experience. If neurohistorians claim to give an account of what it was like in the past on the basis of brain scans in the present, then neurohistory is committed to identifying what goes on in experience with what goes on in the brain.

The identification is by no means innocent. As Fernando Vidal persuasively argues, the commitment is symptomatic of a modern ideology that “the mind is what the brain does.”⁴⁶ This ideology is a default folk psychology. It draws its force from a particular notion of subjectivity that construes the qualitative aspects of experience, such as what it is like to perceive, deliberate, and think, as functions of the quantitative data represented in neuro-imaging technologies. Fernando Vidal along with Francisco Ortega state the critique forcefully:

On the one hand, events on the visual surface of the computer screen are extrapolated into the brain (making it “light up” with intelligence, and “glow” with fear and desire); the organ is thereby personified and equated with the person. On the other hand, while in the laboratory setting, the label that will characterize the scanned subjects (normal, depressed, doped this or that) is established *before* the scanning begins; popular accounts tend to suggest that images provide the label, thus turning a social process into the subject’s essence.⁴⁷

⁴⁶ Fernando Vidal, “La Neuroesthétique.”

⁴⁷ Fernando Vidal and Francisco Ortega, “Approaching the Neurocultural Spectrum: An Introduction,” 15-16.

Determinations of what particular qualitative experiences *mean* – what fear, anxiety, desire, or reasoning *are* – must first be made in a normative and cultural context before those experiences can be observed in neuro-images. Vidal's and Ortega's point is that neuroscientists do not neutrally read these determinations off of EEG scans or fMRI images. Rather, culturally specific determinations subtend the very capacity of neuroimaging technologies both to be representative of what qualitative experiences *are* and, in turn, to represent qualitative experiences as happening *within* the brain. The twofold process by which the brain becomes identified with the totality of experience – both its meaning and its location – depends on a particular understanding of selfhood, what Vidal calls the “cerebral subject,” or what Nikolas Rose calls the “neurochemical self.”⁴⁸ This understanding reduces the conscious and culturally normative determination of qualitative experience to the quantitative facts exhibited in neuro-images.

Consequently, the neuroscientific research that neurohistorians appropriate does not so conveniently integrate the scientific and the cultural to effectuate the desired rapprochement between biology and history. This is not to say that the neuroscientific research that interests Smail and Hunt is a cultural construction without naturalistic validity. Rather, it is an irreducibly cultural concept of cerebral subjectivity that facilitates Smail's and Hunt's *appropriation* of neuroscientific research in the service of revealing a nonconscious notion of experience.

This particular notion of experience as nonconscious is problematic. Despite their attempts to explain historical actors' experience from the collaborative perspectives of biology and culture, neurohistorians construe the two perspectives as functioning on distinct levels, the former on a nonconscious level and the latter on a conscious level.

⁴⁸ Nikolas Rose, “Neurochemical Selves,” *Society* 41 (2003): 46-59.

This amounts to what Leys calls “anti-intentionalism.” According to Leys, neurohistorians invoke neuroscientific research in order to unveil the brain processes functioning, as it were, behind the backs of historical actors. Smail’s psychotropic mechanisms are exemplary, in the eyes of Leys, since they “must be viewed as independent of, and in an important sense prior to, ideology—that is, prior to intentions, meanings, reasons, and beliefs— because they are nonsignifying, autonomic processes that take place below the threshold of conscious awareness and meaning.”⁴⁹ New autotropics such as coffee, tea, and tobacco, to recall Smail’s argument, stirred energizing, even loquacious, moods that caused Europeans in the seventeenth and eighteenth centuries to engage in a new public discourse. Smail replaces an analysis of the meaning of Enlightenment thought with an analysis of its affective, neurophysiological triggers, thereby demonstrating his commitment to anti-intentionalism.

Leys uses a philosophically robust definition of intentionality borrowed in part from the phenomenological tradition: “intentionality involves concept possession; the term intentionality carries with it the idea that thoughts and feelings are directed to conceptually and cognitively appraised and meaningful objects in the world.”⁵⁰ For the phenomenological tradition, beginning with Franz Brentano and Edmund Husserl, “intentionality” signifies the “about-ness” relation that consciousness has toward its experiences, whereby experience is a matter of the subject’s relation to its intentional objects. Neurohistorians are anti-intentionalists in the sense that the kinds of experiences

⁴⁹ Leys, “The Turn to Affect: A Critique,” 437.

⁵⁰ Ruth Leys, “Affect and Intention: A Reply to William E. Connolly,” *Critical Inquiry* 37 (2011): 802.

that interest them, and which the neurosciences are meant to reveal, do not depend in any way on the meaning-making contributions of historical actors' minds.

Leys sees neurohistory as symptomatic of a wider turn to affect across the humanities and social sciences. One of the most influential affect theorists is Brian Massumi, who as early as 1995 argued that affect is an autonomous, animating force, producing effects faster than conscious thought.⁵¹ Massumi sees himself as responding to the excesses of the linguistic turn, wherein "The classical definition of the human as the rational animal returns in new permutation: the human as the chattering animal. Only the animal is bracketed: the human as the chattering of culture."⁵² To restore the "animal," Massumi poaches from a series of neuroscientific experiments, above all Benjamin Libet's famed "missing half second" experiment, to demonstrate that the affective circuitry of the body acts in advance – .5 seconds to be precise – of the conscious coordination of volitional activity.⁵³ For Massumi, as well as for a host of other humanities and social science scholars, "affect" functions as a malleable concept facilitating a new focus on the body in the aftermath of the linguistic turn. William Connolly brings affect into political theory. "The ubiquity of affect," he claims, "is at work the force-fields of rapid news media, state policing, and neoliberal politics, effectively saturating political discourse with noise."⁵⁴ Nigel Thrift brings affect into

⁵¹ Brian Massumi, "The Autonomy of Affect," *Cultural Critique* 31 (1995): 83-109.

⁵² Brian Massumi, *Parables for the Virtual* (Durham, NC: Duke, University Press, 2002), 38.

⁵³ Benjamin Libet, "Unconscious Cerebral Initiative and the Role of Conscious Will in Voluntary Action," *Behavioral and Brain Sciences* 8 (1985): 529-39; Ruth Leys traces the wide reception of Libet's experiment by affect theorists and critiques its erroneous presupposition that automatic activity is unintended: "it is a confusion on both Libet's and Massumi's part to think that because such actions [namely the subject flexing his or her finger to indicate the moment of decision] prompted by an experimenter usually go on automatically, below the threshold of consciousness, it is necessary to break with the whole idea of intentionality and to assume that they can only be explained in corporeal terms." "The Turn to Affect: A Critique," 453.

⁵⁴ William Connolly, *Neuropolitics: Thinking, Culture, Speed* (Minneapolis, 2002), 76.

geography. He investigates the social affects drawing crowds into political decision-making, which traverse individual bodies as nodal points.⁵⁵ Lauren Berlant brings affect into English literary studies. She reads authors who depict “cruel optimism,” the affect inducing people to continue committing themselves to lovers, projects, or ideologies that are ultimately harmful.⁵⁶ What these and other affect theorists share, despite their myriad differences, is an understanding of affect as, in the words of Teresa Brennan, “the physiological shift accompanying a judgment.”⁵⁷ Affects work on the body by means of an “energetic determination,” which is not to be confused with a conscious determination.⁵⁸ What this means, I take it, is that the vital activity of the body generates experiences independent of the meaning-making activity of consciousness. “The result,” Leys summarizes, “is the body not only “senses” and performs a kind of “thinking” below the threshold of conscious recognition and meaning but... because of the speed with which the autonomic, affective processes are said to occur, it does all this before the mind has time to intervene.”⁵⁹

As a consequence of their anti-intentionalism, neurohistorians rely on an unduly myopic picture of consciousness. As long as neurohistorians strive to restore historical actors’ experience on the basis of neurophysiological processes at work outside of consciousness or the mind, then the coherence of their project turns on what they mean by these terms. When Lynn Hunt writes, for example, “Like newspapers and novels, prints had direct bodily effects via both the unconscious bodily emotions and conscious

⁵⁵ Nigel Thrift, “Intensities of Feeling: Towards a Spatial Politics of Affect,” *Geografiska Annaler* 86 (2004): 57-78.

⁵⁶ Lauren Berlant, *Cruel Optimism* (Durham, NC: Duke University Press, 2011).

⁵⁷ Teresa Brennan, *The Transmission of Affect* (Ithaca, NY: Cornell University Press, 2004), 5.

⁵⁸ *Ibid.*, 6.

⁵⁹ Ruth Leys, “The Turn to Affect: A Critique,” 450.

embodied feelings,” the intelligibility of her claim that media have “*direct* bodily effects” hinges on the distinction that she proceeds to draw between “*unconscious* bodily emotions” and “*conscious* embodied feelings.”⁶⁰ The force of Leys’ critique, as I understand it, is to show that neurohistorians and affect theorists end up relying on a restricted picture of consciousness when they claim that a host of neurophysiological experiences occur outside of it. As Leys states, “it is only by adopting a highly idealized or metaphysical picture of the mind as completely separate from the body and brain to which it freely directs its intentions and decisions that they can reach the skeptical conclusions they do.”⁶¹ The profit that neurohistorians hope to garner from their investment in the neurosciences, after all, is that they reveal the nonconscious experiences of historical actors. In order for psychotropic alterations and direct bodily effects to be experienced outside of consciousness, for Smail and Hunt respectively, both historians narrow the scope of consciousness to transparent and rational calculation. Herein lies the crux of neurohistorians’ reductionism.

Scientific spiritualists such as Alfred Fouillée critiqued a similarly restricted picture of consciousness attending the emerging experimental psychology and evolutionary biology of the nineteenth century in prescient terms: “Consciousness becomes a spectator, a witness, an eye contemplating things whose course it cannot change; even less than that, it is a simple reflection throwing momentary light on a genuinely obscure and unconscious depth.”⁶² But rather than reject these sciences for their reductionism, new spiritualist thinkers like Fouillée sought to build on their research program by articulating an expanded picture of consciousness.

⁶⁰ Lynn Hunt, “The Experience of Revolution,” 677, my emphasis.

⁶¹ Ruth Leys, “The Turn to Affect: A Critique,” 155.

⁶² Alfred Fouillée, *L’évolutionnisme des idées forces* (Paris: Félix Alcan, 1890). 36.

Despite their incisive critiques of neurohistorians' problematic uses of the neurosciences, neither Leys nor Vidal offer a positive proposal for better historiographical uses of the neurosciences. In light of new spiritualists' project, I want to ask whether Leys' and Vidal's critiques of neurohistory undermine the entire endeavor of historians to stage a rapprochement between neuroscience and history? Might it still be possible to hold onto a salvageable core of the neurohistorical program? Neither Vidal nor Leys make any mention of new spiritualist thinkers in their work, but that is perhaps all the more reason why the history of the new spiritualism, I want to suggest, can offer a productive intervention in the present debate.

Scientific Spiritualism Today

The history of scientific spiritualists' engagement with the emergent sciences of the nineteenth century can help to deepen the critique that Leys and Vidal mount against neurohistorians' problematic uses of the neurosciences. At stake for scientific spiritualists as well for Leys and Vidal, is the reductionism of the old and new brain sciences. But rather than having rejected the nascent sciences of their period outright, scientific spiritualists used them as a constructive basis on which to advance an expanded picture of consciousness and with it, a richer account of experience. It is this constructive project, I would like to suggest, which can help guide historians toward a more productive engagement with the neurosciences today.

Scientific spiritualists conceived consciousness as, at bottom, a form of both corporeal and conceptual activity.⁶³ In opposition to neo-Kantian thinkers who conceived consciousness as an *act* of judgment, whereby the intellect evaluates the concepts through which it represents the world – an act contemporary philosophers construe as the giving and taking of reasons – scientific spiritualists conceived consciousness as an *activity* embedded in a shared biological, social, and historical world. The emergence of this pragmatic conception in late nineteenth-century France took off, as I documented in Part I, in part thanks to the revival of the early nineteenth-century philosopher, Maine de Biran. Biran presented conscious activity under two aspects: external and internal. External experiences make use of the body’s external sense organs to perceive discrete and punctual sensations in the outside world. Internal experiences make use of the internal organs and engender the feeling of muscular effort, a holistic and continuous sensation. Affection and intellection are thereby inseparable. Where scientific spiritualists advanced beyond Biran was in explaining these kinds of activity, the external and the internal, as two dimensions of the same conscious experience, rather than as distinct experiences. It followed that the philosophical problem scientific spiritualists confronted was not to connect body and spirit, but rather to explain how the emergent sciences could produce the illusion that two were separate. Since my immediate relation to my own body is always one dimension of phenomenal experience, Biran held, it is only by abstracting an idealized picture of consciousness that I can come to see my body and mind as distinct entities. I want to suggest that this multi-dimensional picture of consciousness as an activity that is at once psychic and embodied lends conceptual purchase to Leys’ critique

⁶³ Although “mind” is more common today, the term was not part of the philosophical lexicon in nineteenth-century France. *La conscience* [consciousness] was the closest equivalent.

of neurohistorians’ “mistaken commitment to the idea of a presumed separation between the affect system on the one hand and signification or meaning or intention on the other.”⁶⁴

For scientific spiritualists, making meaning and corporeal feeling are both activities performed within and by consciousness. Fouillée evinced this commitment in his notion of *idées-forces*, which holds that ideas are intellectual objects that drive toward action. As he wrote in his treatise on *idées-forces*, “there is the intellectual in emotion, the emotional in intelligence, and attention and *appétition* in every emotion and in every intellection.”⁶⁵ Mental activity and bodily activity were therefore not understood as two separate experiences, the former occurring within consciousness and the latter outside of it. Rather, Fouillée took both to be different dimensions of the totality of conscious experience.

Scientific spiritualists’ constructive engagement with the nascent experimental psychology and evolutionary biology provided an occasion to critique these sciences’ reductionism by articulating an expanded, multi-dimensional account of consciousness. As I documented in Part II, the claims of experimental psychologists to reveal nonconscious, purely physiological processes were manifest in Fechner’s use of psychophysics to uncover the nonconscious sensations beneath the just-noticeable differences of conscious perceptions, as well as in Ribot’s use of psychopathology to ascertain the organic, evolutionary laws governing the conservation and recollection of memory. Bergson’s critique of these respective methods in his first two books, *L’Essai sur les données immédiates de la conscience* and *Matière et mémoire*, sought to limit the

⁶⁴ Ruth Leys, “Affect and Intention: A Reply to William E. Connolly,” 799-800.

⁶⁵ Alfred Fouillée, *L’évolutionnisme des idées-forces*, 83.

reach of psychophysics and psychopathology to the superficial dimension of conscious experience – the sensorial dimension in contact with the external world. Bergson argued that Fechner and Ribot erred by extending the results of their research beyond the external dimension of consciousness to an allegedly nonconscious, anterior dimension. Bergson's claim was that the quantitative duration of perceptions and the physiological laws of memory are not outside consciousness, but inhere in one dimension of consciousness. The data of experimental psychology thus adhere to a distinct logic best suited, Bergson contended, to the laws of associationism and the principles of mechanism on which psychophysics and psychopathology respectively built their methods. Bergson thought that these methods adequately capture the regular succession of discrete, momentary perceptions operating in the external dimension of consciousness. Beyond his critical task, Bergson took as his constructive task to articulate the principles of the deeper, internal dimension of consciousness that surpasses the reach of psychophysics and psychopathology.

The internal dimension of consciousness, scientific spiritualists agreed, exceeds the reach of scientific methods because it is more responsive to freedom. Since freedom, following Biran, is experienced as a continuous and holistic integration of motor effort, it can only be revealed using philosophical tools of qualitative description – what philosophers would later call phenomenological reflection – rather than by using scientific methods of experimentation. Émile Boutroux succinctly posited this constructive task in *De la contingence des lois de la nature*:

Now, abandoning the external point of view where things appear as fixed and limited realities, so that we may fathom our deepest self and, if we can, apprehend our being in its true origin, we find that freedom is an infinite power. We are conscious of this power every time we truly act.

Our actions do not, cannot realize it, and so we are not this power ourselves. It exists, nevertheless, since it is the root of our very being.⁶⁶

In contrast to the fragmentary activity of the external dimension of consciousness that the sciences discern, scientific spiritualists like Boutroux developed accounts of the fluid and free activity inhering in the internal dimension of consciousness. It was within this intellectual historical context that Bergson developed his concept of the lived experience of time, or *durée*, which, he argued, exceeds scientific psychologists' measurement of psychic states:

Below homogeneous duration, which is the extensive symbol of true duration, a close psychological analysis distinguishes a duration whose heterogeneous moments permeate one another; below the numerical multiplicity of conscious states, a qualitative multiplicity; below the self with well-defined states, a self in which *succeeding each other* means *melting into one another* and forming an organic whole.⁶⁷

Bergson's distinction between the homogeneous, extensive, and quantitative form of superficial conscious states on the one hand, and the heterogeneous, intensive, and qualitative form of deep conscious states on the other hand, reflected his commitment to the scientific spiritualists' project of developing a philosophical account of the inner dimension of consciousness, which, because it is free, eludes the sciences' measurement of the external dimension.

Philosophers in France tackled the emerging quantitative methods head-on by reorienting public philosophy instruction around experimental psychology in the *lycées*. As I documented in Part III, the philosophy curriculum released by the Ministry of Public Instruction in the *programme* of 1874 broke with metaphysical study of consciousness

⁶⁶ Émile Boutroux, *The Contingency of the Laws of Nature*, trans. Fred Rothwell (Chicago: Open Court, 1920), 179.

⁶⁷ Henri Bergson, *Time and Free Will: An Essay on the Immediate Data of Consciousness*, trans. F.L. Pogson (New York: Dover, 2001), 128.

championed by Victor Cousin, who controlled public philosophy instruction until his death in 1867, and put students in newfound contact with experimental research. Bergson stood out as a young *lycée* professor for having seized the new pedagogical material. Following the mandatory psychology lesson on the distinction between psychological and physiological facts, Bergson added his own on “the problem of the unconscious,” in which he encouraged students to challenge experimental psychologists such as Ribot, Fechner, and Wundt. Their error, Bergson claimed was “to assimilate a psychic state to a state of matter.”⁶⁸ The feelings undergone in the body, he urged, do not take place outside of consciousness. Bergson instead took Ribot, Fechner, and Wundt to reveal one dimension of consciousness among others, since, as Bergson reminded students, “What one must admit is that consciousness has degrees... Beyond the clear and distinct consciousness, there is another vague, confused and enveloped consciousness.”⁶⁹

Although the emergent sciences of the late nineteenth century are certainly outdated in contrast to the neurosciences, scientific spiritualists offered a model of constructive engagement with the sciences still tenable today. Instead of having rejected the reductive picture of consciousness advanced by the nascent sciences, scientific spiritualists used them as the bases on which to develop an expanded picture of consciousness. As Alfred Fouillée succinctly put it, “Where science ends, metaphysics begins, and above all, the metaphysics of action.”⁷⁰ The model of leaping beyond scientific results to achieve an expanded picture of consciousness motivated scientific spiritualists’ shared project. “The philosopher’s point of departure is correcting the truth

⁶⁸ Henri Bergson, *Cours de psychologie de 1892-1893 au lycée Henri-IV*, ed. Sylbain Matton and Alain Panero (Paris: SEHA, 2008), 162.

⁶⁹ Henri Bergson, *Cours I. Leçons de psychologie et de métaphysique Clermont-Ferrand, 1887-1888*, ed. Henri Hude (Paris: Presses universitaires de France, 1990), 94-95.

⁷⁰ Alfred Fouillée, *La Liberté et le déterminisme*, 2nd edition (Paris: Félix Alcan, 1884), 358.

reduced to dogmatic formulas, such as those resulting from the organization that science elaborates,” Édouard Le Roy affirmed in “Science et philosophie.” “It is impossible to begin otherwise, since thought would have no solid point of reference.”⁷¹

The moral that neurohistorians should take from scientific spiritualists’ critical project is that the research program of the neurosciences is mistaken so long as it is interpreted to reveal experiences outside of consciousness. A nonconscious experience is a reductive notion: it is no experience at all. The scientific spiritualists incisively demonstrated that, to the contrary, the emergent sciences of the nineteenth century successfully expanded the dimensions of consciousness beyond the exclusively intellectual scope of their neo-Kantian contemporaries.

As long as there are historians interested in making use of the neurosciences to reveal historical actors’ experiences, then they should take guidance from scientific spiritualist thinkers’ constructive project of using scientific research to advance an expansive, multi-dimensional account of consciousness. This constructive project can also enrich the critique that Leys and Vidal mount against neurohistorians’ reductionist use of the neurosciences by offering a positive model for productive uses of the neurosciences.

This is not at all to argue that historians ought to keep up to date with neuroscientific literature. Rather, I want to suggest that scientific spiritualism offers a vision for those who do. While I have no crystal ball to predict the future paradigms that historians will embrace, the history of the emotions offers the most promising program

⁷¹ Édouard Le Roy, “Science et Philosophie III,” *Revue de Métaphysique et de Morale*, T. 7, No. 6 (1899): 719.

for appropriating neuroscientific research to advance an expansive, multi-dimensional account of historical experience

The Program for the History of Emotions

In 1997, William Reddy presented a program for the historical study of the emotions on the basis of neuroscientific research. Like neurohistorians, Reddy sought to escape the excesses of constructionism, which, following the linguistic turn generally and Foucault's discursive methodology in particular, he thought had construed historical subjectivity as "the absolute plasticity of the individual."⁷² The neurosciences, Reddy believed, offer a universal basis firmly grounded in reality from which to investigate historical experience.

Where Reddy's project differs from neurohistory's is in his claim to interpret historical actors' emotional experiences from their conscious statements about emotional experiences. Reddy dubs these kinds of statements "emotives." An emotive is a form of speech act whose performative force mobilizes the speaker's emotion. For example, the emotive, "I am angry," evokes the speaker's anger; it does not merely describe whether he or she is angry. Reddy conceives emotives as "instruments for directly changing, building, hiding, intensifying emotions."⁷³ The semantic form and meaningful content of emotives depends on their particular cultural and historical context. What the neurosciences provide is "some conception of the givens upon which this lexicon works (either well or poorly), to discover the tensions out of which change may grow and the

⁷² William Reddy, "Against Constructionism: The Historical Ethnography of Emotions," *Current Anthropology* 38, no. 3 (1997): 327.

⁷³ *Ibid.*, 331.

stakes in terms of the distribution of political power”⁷⁴ For Reddy, the neurosciences help to reveal the kinds of neurophysiological mechanisms on which humans draw when conveying their experiences in the form of emotives. These mechanisms are at work as humans learn how to express emotion; and although their expressions are historically and culturally mediated, the biological bases of emotional training are universal. The historical study of the emotions, on Reddy’s account, finds its justification in the neurosciences yet surpasses their research program by making use of distinctly historical methods of interpretation.

Historians have studied emotions for some time. In *The Autumn of the Middle Ages* (1919) Johan Huizinga explored the emotional life of fourteenth and fifteenth-century men and women. In his magnum opus, *The Civilizing Process* (1939), Norbert Elias documented the emergence of emotional control since late medieval period. Peter N. Stearns and Carol Zisowitz Stearns continue to advance their studies in “emotionology,” which they inaugurated in 1985 with an article urging historians to examine the social rules and norms governing the emotions.⁷⁵

In the last fifteen years, Reddy’s program has motivated historians of diverse specializations to gather around a distinct approach to the history of emotions on the basis of the neurosciences. These historians depart from neurohistorians, and avoid the reductionist pitfalls that Leys and Vidal identify, in their nearly ubiquitous commitment to the imbricated relation between emotion and cognition, or corporeal and intellectual experience. In his first book to pursue his research program, *The Navigation of Feeling* (2001), Reddy explicitly criticizes the view that emotions, because of their non-linear

⁷⁴ Ibid., 335.

⁷⁵ See Peter N. Stearns and Carol Z. Stearns, “Emotionology: Clarifying the History of Emotions,” *American Historical Review* 90, no. 4 (1985): 813-836.

structure and physiological dependence, “departed from a vision of conscious, rational, voluntary action that was believed to be the hallmark of human intelligence.”⁷⁶ Instead, he advances an account of conscious experience that is of a piece with the multi-dimensional account developed by scientific spiritualists: “as thinking has increasingly been regarded as reflecting multiple levels of activation, attention, and coherence, it has become difficult to sustain the distinction between thought and affect.”⁷⁷ It follows that neurophysiological processes do not work, as it were, behind the backs of historical agents; rather, historical agents actively take up and make use of their physiology.⁷⁸ Other historians of the emotions reiterate this view. In her book on emotions in the middle ages, Barbara Rosenwein writes, “The close connection between emotions and goals aligns them with conscious, well considered thought; there is no need – indeed it is incorrect – to separate emotions from ideas.”⁷⁹ In her book on sensibility in the American Revolution, Sarah Knott presents cognition and emotion, “not in strict oppositions of head and heart, reason and passion, but rather in a naturally sensitive, briskly responsive, and thoroughly holistic self.”⁸⁰

None of these historians mention Bergson or scientific spiritualists. The history of these thinkers’ engagements with the emergent sciences of the late nineteenth century nonetheless helps to underline the significance of Reddy’s program, in particular his proviso that the neurosciences must be interpretively integrated into an account of the self

⁷⁶ William Reddy, *The Navigation of Feeling* (New York: Cambridge University Press, 2001), 31.

⁷⁷ Ibid.

⁷⁸ Monique Scheer pursues this point, arguing that emotions can be thought of as forms of practice. Her conception of “practice,” however, is not neuroscientific. See “Are Emotions a Kind of Practice (And is That What Makes Them Have a History)? A Bourdieuan Approach to Understanding Emotion,” *History and Theory* 51 (2012): 193-220.

⁷⁹ Barbara Rosenwein, *Emotional Communities in the Early Middle Ages* (Ithaca, NY: Cornell University Press, 2006), 14

⁸⁰ Sarah Knott, *Sensibility and the American Revolution* (Chapel Hill, NC: University of North Carolina Press, 2009), 5.

in order to contribute a meaningful account of experience. He urges historians not to treat any neuroscientific position as a ready-made theory, easily serviceable to ground historical subjectivity.⁸¹ This enjoins historians to set their methods in a precise division of labor with the neurosciences. It is here where the history of the emotions best reflects new spiritualist thinkers' constructive project for engaging the sciences.

Reddy makes use of the affective neurosciences in order to provide a language for humans' natural capacities for regulating emotion. Following the research of Alice Isen and Gregory Diamond, Reddy conceives emotions as "overlearned cognitive habits."⁸² Even though emotions seem to follow automatically from stimuli, coloring experiences, as it were, without the mind's attentive and meaningful contributions, emotions are nevertheless slowly formed and deformed over time. This conception of emotions contradicts that of the basic emotions paradigm originally advanced by Paul Ekman and Wallace Friesen, according to which there are six biologically universal emotions that manifest transparently via facial expressions: happiness, sadness, fear, anger, surprise, and disgust.⁸³ Ekman and Wallace did countenance culturally specific "display rules" that overlay and modify how individuals convey more complex emotions.⁸⁴ But research in cognitive psychology has since affirmed that intention and meaning play active roles in shaping emotions through and through. Reddy highlights two ways in which emotions should be thought of as overlearned cognitive habits in *The Navigation of Feeling*. First, emotions reflect peoples' goals. Actions, events, and

⁸¹ William Reddy, "Historical Research on the Self and Emotions," *Emotion Review* 1 (2009): 302-315

⁸² Alice Isen and Gregory Diamond, "Affect and automaticity" in *Unintended Thought*, eds. James Uleman and John Bargh (New York: Guilford Press, 1989), 144, cited in William Reddy, *The Navigation of Feeling*, 16.

⁸³ Paul Ekman and Wallace V. Friesen, "Constants across Cultures in the Face and Emotion," *Journal of Personality and Social Psychology* 17, no. 2 (1971): 124-129.

⁸⁴ Paul Ekman and Wallace V. Friesen, "The Repertoire of Nonverbal Behavior: Categories, Origins, Usage, and Coding," *Semiotica* 1 (1969): 49-98.

circumstances elicit emotions whose valence involves the significances attributed to them. The fear or anxiety one might feel when his or her health is jeopardy, for example, evinces the goal of living healthfully. Second, emotions involve mental control. To the extent that social norms govern how individuals ought to express or repress their emotions, hardwired constraints also prevent humans from completely bending emotions to their will. Reddy brings attention to the “reflexivity constraint,” whereby actively repressing a feeling can paradoxically evoke the feeling more powerfully.⁸⁵ Between the pressures of culture and biology, emotion constitutes what Reddy calls a “domain of effort.”⁸⁶

A recent study of neuro-images displaying emotional responses conducted by Kristen Lindquist and her colleagues confirms that emotions cannot be understood as natural-kinds, localizable in specific centers of the brain. Emotions activate multiple pathways. For example, the amygdala, which is supposed to control fear, is also active in other emotions, such as disgust. “[A]ffect and executive attention are merely two different sources of attention in the brain,” the authors conclude, “rather than processes that differ in kind.”⁸⁷ In other words, emotion admits universal regulative mechanisms that work in concert with other conscious activities. Learning to properly activate these mechanisms depends on culturally specific emotional norms, the minute analysis of which exceeds neuroscientific methods. The study’s moral, as Reddy suggests in a recent

⁸⁵ See Daniel Wagner, “Ironic Processes of Mental Control,” *Psychological Review* 101, no. 1 (1994): 34-52, cited in William Reddy, *The Navigation of Feeling*, 25-32.

⁸⁶ William Reddy, “Historical Research on the Self and Emotions,” 311.

⁸⁷ Kristen A. Lindquist, Tor D. Wager, Hedy Kober, Eliza Bliss-Moreau, Lisa Feldman Barrett, “The brain basis of emotion: A meta-analytic review,” *Behavioral and Brain Sciences* 35 (2012): 142.

lecture, is that “emotions have a history.”⁸⁸

This division of labor between neuroscientific experimentation and historical interpretation motivates what Nicole Eustace sees as “the practical and theoretical utility of combining biological and cultural approaches. On the one hand, we are able to analyze eighteenth-century emotion today only because of the existence of a shared physiology of feeling that stretches over the centuries. On the other hand, we cannot simply assume that eighteenth-century emotional expression can now be understood transparently and without translation.”⁸⁹ I take Eustace’s point that emotional experiences cannot be read transparently from neuroscientific experiments to give force to the history of the emotions’ specific methodological approach to the neurosciences. By interpreting how historical documents deploy emotives, historians come to understand how social regimes gave shape to the norms through which historical actors articulated their emotional experiences.

The conception of experience that the history of the emotions employs, unlike that of neurohistory, is public. Emotives open a window onto the kinds of social activities that constituted admissible emotional experiences in certain periods. They do not aim to ascertain the private experience of what it was like to be a certain historical actor – what Lynn Hunt presents as “the microlevel of the French Revolution as subjective experience.”⁹⁰ It is wrong, consequently, to characterize the history of emotions as if “Its practitioners try to get *into the heads* of earlier generations in order to understand their

⁸⁸ William Reddy, “Do Emotions Have a History? The Example of Romantic Love,” presented at the Centre for the History of Emotions and the School of Historical and Philosophical Studies, University of Melbourne, March 14, 2013, <http://www.youtube.com/watch?v=TOMMtDrUfSI> (accessed July 1, 2013).

⁸⁹ Nicole Eustace, *Passion is the Gale: Emotion, Power, and the Coming of the American Revolution* (Chapel Hill, NC: University of North Carolina Press, 2008), 12.

⁹⁰ Lynn Hunt, “The Experience of Revolution,” 672.

complex emotions and motivations.”⁹¹

Reddy carries out his program in *The Navigation of Feeling* by documenting the regulation of emotional experience in eighteenth and nineteenth-century France. Reddy argues that the royal court of Louis XIV enforced a rigid “emotional regime” through the civil code, which repressed its subjects’ abilities to express their emotions in public. Those who sought to escape the code’s constraints found “emotional refuge” in salons, theatres, clubs, and popular novels. Sentimental emotions found free expression in these spaces. The Revolution, according to Reddy, marked the overthrow of an emotional regime as much as the overthrow of the royal court. A space was cleared for the once marginalized sentimentalism to occupy the position of the new emotional regime. In the immediate post-Revolution era, emotions became a criterion of sound political discourse: Jacobins employed sentimentality in their arguments to justify their moral authority.

Emotion functioned not only as a dimension of political reason, which historians have widely identified as central to Revolutionary discourse (and Enlightenment discourse more broadly).⁹² According to Reddy, emotional activity was also one factor among other institutional, economic, and political factors that drove historical change, since revolutionaries sought to mold the new Republic in the image of the sentimentality enjoyed in emotional refuges.⁹³ “The power of emotions to shape feelings had a decisive impact on the opening and the outcome of the Revolution. The eighteenth-century rise of sentimentalism gave the Revolution both its initial impetus and a strong bias toward

⁹¹ Susan J. Matt, “Current Emotion Research in History: Or, Doing History from the Inside Out,” *Emotion Review* 3, no. 1 (2011): 122, my emphasis.

⁹² See François Furet, *Interpreting the French Revolution*, trans. Elborg Forster (New York: Cambridge University Press, 1981); Jürgen Habermas, *The Structural Transformation of the Public Sphere: An Inquiry into a Category of Bourgeois Society*, trans. Thomas Burger (Cambridge, MA: MIT Press, 1991), esp. chaps. 2 and 3.

⁹³ William Reddy, *The Navigation of Feeling*, 147.

extremism.”⁹⁴ The “emotional liberty” produced under Jacobin rule was short-lived and, Reddy hastens to add, disastrous. With the Terror, those who failed to express “true” emotives were deemed evil. But the Directory swiftly undermined sentimentalism by replacing it with “masculine reason.” Whereas the Jacobins tethered political discourse to emotional expression, the Napoleonic era severed the two. Newfound emotional refuges took form in art, literature, and domestic life, prompting the rise of the romantic passions that would come to define early nineteenth-century French aesthetics.

The affective neurosciences facilitate Reddy’s narrative by offering an additional layer of historical meaning with which to explain the Revolution. The emotional dimension in which French men and women experienced the Revolution depended on their deliberate self-regulation of emotions in conformity with the social norms governing their expression. *The Navigation of Feeling* thereby makes good on Reddy’s claim in his programmatic article, “Emotional control is the real site of the exercise of power: politics is just a process of determining who must repress as illegitimate, who must foreground as valuable, the feelings and desires that come up for them in given contexts and relationships.”⁹⁵ The science of emotional regulation thereby contributes another tool with which historians can explain the exercise of power beyond its material, discursive, or gendered forms. The success of Reddy’s narrative, I want to suggest, depends on his commitment to using the neurosciences constructively in order to develop what he calls in a recent interview a “hermeneutic” account of emotional experience: “I attempt to understand human existence by examining the intentions of persons, what they mean to

⁹⁴ Ibid., 258.

⁹⁵ William Reddy, “Against Constructionism,” 335.

say, what they mean to do.”⁹⁶ In this, Reddy overcomes the reductionist pitfalls of neurohistory. The neurophysiological mechanisms of emotion do not serve to reveal experiences as such, but instead enable him to “propose that a new class of intentions be added to the mix, that is, intentional shaping of one's own emotions.”⁹⁷ Herein also lies Reddy’s implicit conceptual debt to scientific spiritualism’s project of correcting the reductionist tendencies of the sciences by appropriating them to expand the dimensions of conscious experience.

Reddy advances this constructive model in his most recent book, *The Making of Romantic Love: Longing and Sexuality in Europe, South Asia, and Japan, 900-1200 CE*. He examines how the distinction between romantic love and desire (understood as a carnal appetite) emerged in twelfth-century Europe. Reddy traces the origins of the dualism to, on the one hand, the Gregorian reforms that condemned all sexual partnerships as inherently sinful on account of the bodily-driven desire of the flesh, and on the other, troubairitz and troubadour conceptions of true love, or *fin’amors*, that elevated selfless love for another as a truer form of sexual partnership, effectively spiritualizing bodily desire. The form of Reddy’s argument is similar to that in *The Navigation of Feeling*. Romantic, or courtly love, developed as a purified form of desire that escaped the rigid restrictions that Gregorian reforms imposed on all forms of sexual partnerships. It was thanks to the conflict between these two emotional regimes that the distinction between romantic love and desire-as-appetite gained coherence. Reddy contrasts this Western distinction to practices in Bengal and Orissa kingdoms of South Asia and Heian Japan, neither of which opposed flesh and spirit, and its corollary,

⁹⁶ William Reddy in “AHR Conversation: The Historical Study of Emotions,” 1509.

⁹⁷ Ibid.

romantic love and desire-as-appetite. Taking his point of departure from the purportedly neutral language of the affective neurosciences, Reddy's comparative historical ethnography proceeds to demonstrate "three modes of understanding of longing and sexuality that developed independently as quite distinct realizations of human possibilities."⁹⁸

Numerous historians of the emotions who I have already mentioned in this section adopt Reddy's constructive model for using the neurosciences to expand the dimensions of historical experience. Barbara Rosenwein explores what she calls the "emotional communities" of the sixth and seventh centuries in *Emotional Communities in the Early Middle Ages*. According to Rosenwein, "An emotional community is a group in which people have a common stake, interests, values, and goals."⁹⁹ She documents three emotional communities in the towns of Trier, Vienne, and Clermont in Francia, unified in their Christianity, yet distinguished in their regulation of emotions. One kind of emotive that Rosenwein interprets is found in the epitaphs that these communities drafted for burial ceremonies. Another kind is found in the writings of Gregory the Great and Gregory of Tours, each of whom represented disparate emotional communities: the former distrusted emotions whereas the latter valued emotional metaphors embracing family feeling. Rosenwein does not adopt Reddy's program uncritically. She takes issue with its binary structure: "He recognizes one set of emotives for the royal court and another set – a very different one – for emotional refuges...Although the venues for such refuges were legion...the new emotives within these refuges were all of one type:

⁹⁸ William Reddy, *The Making of Romantic Love: Longing and Sexuality in Europe, South Asia, and Japan, 900-1200 CE* (Chicago: University of Chicago Press, 2012), 348.

⁹⁹ Barbara Rosenwein, *Emotional Communities in the Early Middle Ages*, 24.

sentimentalism.”¹⁰⁰ Rosenwein multiplies Reddy’s binary set of emotives in order to conceive “emotional communities” as constellations of shared emotions. Rosenwein’s book makes good on her own programmatic article in which she posits a model for engaging the neurosciences, which demonstrates that, despite her nuanced difference, she shares Reddy’s model: “The physical and mental capacity to have emotions is universal, but the ways those emotions are themselves elicited, felt, and expressed depend on cultural norms as well as individual proclivities.”¹⁰¹

In *Passion is the Gale: Emotion, Power, and the Coming of the American Revolution*, Nicole Eustace examines emotives deployed in Pennsylvania from the Seven Years War up to the Declaration of Independence. Colonists treated emotions as forms of power, she argues, by fixing them to social positions. Cheerfulness was understood as an elite emotion, while slaves expressed melancholy. The American Revolution untethered emotions to social position, inaugurating a period in which Revolutionaries saw all emotions as equally a “basic attribute of humanity.”¹⁰² Following Reddy’s program, Eustace uses the neurosciences to posit emotions as a distinct social stratum along which power is expressed: “if all people have the potential to *feel* the same emotions, then patterns in who expresses what and when and to whom assume real political significance.”¹⁰³

As long as historians look to the neurosciences to provide a new historiographical paradigm in the wake of the linguistic turn, then it is imperative to avoid the pitfalls of reductionism that Leys and Vidal rightly detect. In light of the current trends in

¹⁰⁰ Ibid., 23.

¹⁰¹ Barbara Rosenwein, “Worrying about Emotions in History,” *American Historical Review* 107, no. 3 (2002): 837-8.

¹⁰² Nicole Eustace, *Passion is the Gale*, 476.

¹⁰³ Ibid., 11.

historiography, where neurohistory and the history of emotions offer the most formidable programs for engaging the neurosciences, it is the latter which promises to advance the discipline. Not all historians of the emotions draw on neuroscientific research, nor must they; but those who do profit from an enriched account of historical experience drawn from thick descriptions of the training and molding involved in emotional life. Scholars have pursued this project further in contexts such as the American Revolution¹⁰⁴, ancient Greece¹⁰⁵, and the Protestant Reformation.¹⁰⁶ Perhaps some day historians of all specializations might adopt the methods advanced by historians of the emotions as one historiographical tool among others. But I have no crystal ball. What is clear is that historians of the emotions build on the affective neurosciences to deliver an account of experience that corrects its diminution under the sway of the linguistic turn, without regressing to what Spiegel criticizes as a “collective “common sense” or individual, subjective experience.”¹⁰⁷

What I hope to have shown is that the history of scientific spiritualists’ constructive engagements with the sciences offers a decisive perspective from which to intervene in the current historiographical terrain. What made the spiritualism of Bergson’s generation *scientific* was its willingness, as he wrote, “to take account of the biological, psychological, and sociological sciences, and on this broader base construct a

¹⁰⁴ Sarah Knott, *Sensibility and the American Revolution*.

¹⁰⁵ David Konstan, *The Emotions of The Ancient Greeks. Studies in Aristotle and Classical Literature* (Toronto: University of Toronto Press, 2006), especially 3-40.

¹⁰⁶ Susan Karant-Nunn, *The reformation of feeling: Shaping the religious emotions in early modern Germany* (New York: Oxford University Press, 2010).

¹⁰⁷ Gabrielle Spiegel, “History, Historicism, and the Social Logic of the Text in the Middle Ages,” 73.

metaphysics that can go higher and higher through the continual, progressive, and organized effort of all philosophers, in the same respect for experience.”¹⁰⁸ The dilemma of reductionism, I have tried to show, ought to be matched by historians’ renewal of their distinct disciplinary methods from within the neurosciences. Thus historians might not simply borrow from the prestige of the neurosciences, but surpass their research program by expanding the dimensions of historical experience.

¹⁰⁸ Henri Bergson, “Psychophysical parallelism and positive metaphysics,” trans. Jean Gayon, in *Continental Philosophy of Science*, ed. Gary Gutting (Oxford: Blackwell, 2005), 68.

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- Young, Robert. *Mind, Brain and Adaptation in the Nineteenth Century*. New York: Oxford University Press, 1990.

Curriculum Vitae

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Rhetoric (Honors), Philosophy

PUBLICATIONS

“Bergson Comes to America,” *Journal of the History of Ideas*, vol. 74,
no. 4 (Oct. 2013): 599-620

“Alfred Fouillée Between Science and Spiritualism,” *Modern
Intellectual History* (forthcoming)

“French Theory before *French Theory*: Henri Bergson in America,”
Romanic Review (forthcoming)

“Confronting the Brain in the Classroom: Lycée Policy and Pedagogy
in France, 1874-1902,” *History of the Human Sciences* (forthcoming)

BOOK REVIEWS

“Andrew Jewett. *Science, Democracy, and the American University*,”
Modern Language Notes, vol. 128, no. 5 (Dec. 2013)

“Jennifer Ratner-Rosenhagen. *American Nietzsche. A History of an Icon and His Ideas*,” *Modern Language Notes*, vol. 127, no. 5 (Dec. 2012): 1263-67

“Peter Gordon. *Continental Divide. Heidegger, Cassirer, Davos*,” *Modern Language Notes*, vol. 126, no. 5 (Dec. 2011): 1140-44

“Stefanos Geroulanos, *An Atheism that Is Not Humanist Emerges in French Thought*,” *Modern Language Notes*, vol. 125, no. 5 (Dec. 2010): 1164-67

“Judith Butler. *Frames of War: When is Life Grievable?*,” *Modern Language Notes*, vol. 124, no. 5 (Dec. 2009): 1233-36

TRANSLATIONS

“Interview with Claude Romano” in *Quiet Powers of the Possible: Interviews in Contemporary French Phenomenology*, ed. Tarek Dika and Chris Hackett (New York: Fordham UP, 2014)

PROFESSIONAL APPOINTMENTS

2013	Lecturer, Program for the Study of Women, Gender & Sexuality, Johns Hopkins University
2012	Visiting Researcher in Residence, École normale supérieure, Paris
2011	Editorial Assistant, <i>Modern Language Notes</i> , Comparative Literature Issue
2009-11	Graduate Teaching Assistant, Humanities Center, Johns Hopkins University
2004-08	Speech and Debate Instructor, Presentation High School, San Jose, CA

COURSES DESIGNED AND TAUGHT AT JOHNS HOPKINS UNIVERSITY

2014	“Reason, Religion, and Modernism in Europe,” History and Humanities Center, spring
2013	“Philosophy and the Natural Sciences in Nineteenth-Century Europe,” History and Humanities Center, spring
2013	“History of Science and Sexuality,” Program for Women and Gender Studies, spring
2011-14	“Film and Philosophy,” Humanities Center, winter

HONORS, AWARDS, AND FELLOWSHIPS

- 2013 Dean's Teaching Fellowship, Johns Hopkins University
- 2013 Prize Teaching Fellowship, Program for the Study of Women, Gender and Sexuality, Johns Hopkins University
- 2012 Shirley Passow and Ruth Rickard Humanities Fellowship, Johns Hopkins University
- 2012 Visiting Scholar in Residence, Université Catholique de Louvain, Louvain-la-Neuve, Belgium
- 2008 *Phi Beta Kappa* member
- 2008 Departmental Citation, awarded annually by the Rhetoric Department at the University of California, Berkeley

INVITED LECTURES

- 2013 "Henri Bergson in New York." Part of the conference, "Bergson in America: Bergsonism and American Philosophy" hosted by the Maison Française, Columbia University, Apr. 30
- 2012 Two Lectures: "Maine de Biran and the Origins of Scientific Psychology"; "Henri Bergson and the Contemporary Brain Sciences." Al Quds University, Abu Dis, Palestine, Nov. 13-14

CONFERENCE PRESENTATIONS

- 2014 "Trans-Atlantic Intellectual Transport: The France-America Committee on the Eve of World War I." Society for Historians of American Foreign Relations Annual Meeting. Lexington, KY, June 19-21
- 2014 "Science and Radical Political Programs around May '68." 20th and 21st Century French and Francophone Studies International Colloquium. New York City, March 6-8
- 2013 "Conservatism and Radical Metaphysics in Late Nineteenth-Century French Thought." Society for US Intellectual History Annual Conference. Irvine, CA, Nov. 3
- 2013 "Repetition as an Intellectual Historical Object." Johns Hopkins University Graduate Students Humanities Center Conference, *Repetition*. Baltimore, MD, Feb. 22

- 2011 "The Creative Evolution of Henri Bergson's Concept of Time." Johns Hopkins University Graduate Student Anthropology Conference, *Commemorations*. Baltimore, MD, Apr. 2
- 2010 "What are the Conditions of Non-Human Agency? A Return to Gilles Deleuze's Transcendental Empiricism." Johns Hopkins University Graduate Student Political Science Conference, *Dangerous Crossings: Politics at the Limit of the Human*. Baltimore, MD, Oct. 1-2
- 2010 "Disagreeing Sincerely: A Serious Reading of Stanley Cavell and Gilles Deleuze." New York University Graduate Student Comparative Literature Conference, *Disagreement*. New York City, Mar. 5-6
- 2010 "Time's Invisible Texture: Rethinking Empiricism between Locke and Deleuze." Johns Hopkins University Graduate Student Anthropology Conference, *Invisibilities: Addressing the Question of the Unseen*. Baltimore, MD, Feb. 20
- 2009 "Temporality and Agency as Eternal Recurrence." Duquesne University Graduate Student Philosophy Conference, *Why Nietzsche? Which Nietzsche?* Pittsburgh, PA, Mar. 28

CONFERENCES AND PANELS ORGANIZED

- 2014 "Ideas in Transit: Intellectual Exchanges as Foreign Relations at the Turn to the Twentieth Century." Society for Historians of American Foreign Relations Annual Conference, June 19-21
- 2013 "Mapping Conservatism: Interdisciplinary and Transnational Perspectives on the Question of Conservative Thought, Politics, Language, and Discourse." Society for US Intellectual History Annual Conference, Nov. 3
- 2013 "Legality, Politics, and Ethics of Militarized Drones." The Johns Hopkins University, Apr. 16
- 2013 "Repetition," Humanities Center Graduate Conference, The Johns Hopkins University, Feb. 20-21
- 2011 "Human Rights And The City: Rethinking Social Justice In Baltimore." The Johns Hopkins University, Apr. 8
- 2011 "Directions of Realism," Humanities Center Graduate Conference, The Johns Hopkins University, Feb. 18-19
- 2009 "Inside/Outside," Humanities Center Graduate Conference, The Johns Hopkins University, Apr. 2-3, 2009